Research Note 80-34

EVALUATION AND DESIGN OF A PROTOTYPE SYSTEM FOR MANAGEMENT OF SUPERVISED ON-THE-JOB EXTENSION TRAINING PROGRAM (SOJET)

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This report describes the formative evaluation of a new system for centrally administering nonresident training through the Army Correspondence Course Program. This system is designed to support first line supervisors in conducting on-the-job training (OJT) for tasks performed under their supervision. The major objective of this evaluation was to refine administrative procedures and to streamline manually administered portions of the system for eventual incorporation into a computerized information management system. Criteria used during the formative evaluation of this

Item 20 (Cont'd)

system were field acceptance, administrative feasibility and costs. The training materials administered under this new system were specially designed to support duty position OJT for combat arms operations and intelligence sergeants and assistants.

Major features of the new system are: (1) each student is required to have a supervisor registered in the system; (2) pre and post-tests for each training package requested are mailed directly to the supervisor, lesson materials are mailed directly to the student; (3) all training packages requested are mailed in a one-shot mailing to insure that supervisor and student have full flexibility in sequencing training to meet local priorities; and, (4) supervisor functions as the OJT trainer by counseling the student on task training needs, by administering pre and post-tests for each training package, reviewing test results with the student and forwarding results for inclusion in the student's centrally maintained record file.

Student and supervisor responses obtained during questionnaire and interview surveys were highly supportive of the major features of this system. The separate mailing of test packages to the supervisor and lesson materials to the student makes the new system cost approximately 32% more per student per year than courses which do not directly involve the supervisor. All other costs for the two systems are essentially the same. Supervisor and student responses were in favor of retaining the separate mailing. Data indicate that supervisors were performining the OJT trainer functions and felt they could handle the limited amount of time required. Direct comparison of student performance under the new system with student performance under existing correspondence course methods not directly involving the supervisor was not possible at this time. The existing management information system does not permit identification and retrieval of student record data required for these comparisons. Such comparisons will be possible when the Army's new management information system is installed. It was concluded that, as a result of the revisions and streamlining accomplished during this effort, the revised system is ready to be incorporated into the development of the Army Correspondence Course Program's new management information system. Supplementary materials can be found in RN 80-35 and RN 80-36.

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EXECUTIVE SUMMARY

OBJECTIVES

The Supervised On-the-Job Extension Training (SOJET) program is a new approach to delivering duty position training to a unit in a non-resident mode. The program's delivery system contains features that differ considerably from those used with traditional courses. At present the Army uses the program to administer 16 courses designed for operations and intelligence enlisted personnel in combat battalions.

A field test of the SOJET program was started in the spring of 1978. At that time the program's delivery system had not been debugged, and portions of the program's administrative procedures were not compatible with those used by the Institute for Professional Development (IPD), the agency responsible for administering the Army's Correspondence Course Program.

The purpose of the present research was threefold: (a) to conduct a formative evaluation of the prototype SOJET program; (b) to redesign the program's centralized administrative procedures to make them compatible with those used by IPD; and (c) to complete the design of the SOJET program by developing a feedback system, primarily for course developers. In addition, the research project intended to provide baseline data for use as bench marks when evaluating future extension training or correspondence programs.

METHODOLOGY

Interviews with and surveys of actual and potential students and course supervisors, in both active Army and Army Reserve/National Guard, were used to assess field acceptance of the program and to identify program features in need of change. Training records were analyzed to identify the characteristics of persons who enrolled in the program and the rate at which they progressed through their program of study.

The administrative feasibility of the program was assessed through discussions with personnel from the Institute for Professional Development (IPD). These discussions provided a means of identifying features of the SOJET central mangagement procedures which administrators considered troublesome and/or time-consuming. Solutions to these problems were developed and implemented during the project when possible.

Interviews with course developers at each of the Army's Combat Arms schools provided information which was used to design a feedback

system for course developers. During in-depth interviews with IPD personnel information was obtained on the characteristics of a new computer-based management system soon to be implemented at IPD. SOJET procedures then were revised to make them compatible with planned-for computer support capabilities.

Program costs were determined by analyzing administrative actions to identify the labor and other costs associated with each action.

FINDINGS AND CONCLUSIONS

(1) The SOJET program requires that a course supervisor register along with a student. This course supervisor helps the student plan his course of study, administers and scores tests, reviews test findings with the student, and reports test results to IPD. Both actual and potential supervisors and students reported their acceptance of the course supervisor concept. Whether the requirement to have a registered course supervisor resulted in more effective training, faster student progress through SOJET courses, and/or higher course completion rates could not be determined. It was concluded that in the absence of conclusive data, the decision to continue or to discontinue the registered supervisor requirement would have to be based on policy.

(2) In the SOJET program subcourse tests are sent directly to the course supervisor. Course supervisors reported that this practice seldom caused security or storage problems. However, it does increase mailing and labor costs by a small amount. It was concluded that the approach is an acceptable one for delivering test material and administrative instructions to field personnel. Furthermore, it emphasizes to the supervisor that he is responsible for the student's training.

(3) The SOJET program employs a number of procedures designed to minimize the time required of supervisors to conduct OJT. For each SOJET course a Student Training Plan was provided. These plans were designed to help course supervisors and students identify student work and training requirements. Comments from survey respondents, plus an analysis of Student Training Plan data, indicated that the plans often were not being used as intended--to discriminate between the level of skill required on the job and present skill level of a potential or actual job encumbent. Therefore, it was suggested that the use of STPs be discontinued.

Both students and supervisors reported that the instructional material was of good quality; course supervisors reported that participations in the SOJET program reduced the time required of them to conduct OJT.

Procedures for returning test scores to IPD so that training records could be centrally maintained were found to be time consuming and cumbersome. Revised, simplified test reporting procedures were developed and implemented.

(4) Unlike traditional correspondence courses, all SOJET subcourse lesson materials requested by a student are mailed to him at one time. The corresponding subcourse test materials are sent to the course supervisor at the same time. This approach has been termed "one-shot" mailing; its purpose is to allow students and supervisors to sequence their program of study in accordance with unit requirements.

According to survey data, this approach was acceptable to enrolled students and registered supervisors. However, only a third of the students and supervisors reported taking advantage of the sequencing opportunities afforded by this approach. An analysis of training records showed that many students studied subcourse material in the order in which the subcourses were numbered.

A cost analysis revealed that the "one-shot" mailing is somewhat more expensive than the approach used to mail out material for traditional correspondence courses. Offsetting this finding were survey reports that SOJET material often is used as reference aids or to prepare for Skill Qualification Tests by persons not enrolled in the program. It was suggested that this last finding is a benefit that may more than offset the higher mailing costs of the SOJET approach. It was concluded, therefore, that the "one-shot" mailing should continue to be used with SOJET courses.

(5) The testing procedures in the SOJET program are considerably different from those used with many correspondence courses. Subcourse tests are performance-oriented, and are admininstered and scored by the course supervisor. The supervisor uses a test scoring guide that provides detailed instructions on how to score each test. Also, each subcourse contains a pretest that if passed, allows the student to receive credit for the subcourse without studying the lesson material.

Most course supervisors commented favorably about the scoring guides, although they noted that some guides contain errors in need of correction. Many supervisors did not report pretests results to IPD unless the student passed all requirements on the pretest. Also, supervisors complained about the forms and procedures used to report test results to IPD. In response to these criticisms, the forms and procedures were revised; the requirement to submit pretest results separate from posttest scores was discontinued. The new procedures are easier to follow and use the same test reporting form used for correspondence courses administered by IPD.

(6) Course supervisors are responsible for giving students immediate feedback about test results and for providing guidance regarding what material the student should restudy if he or she failed portions of a test. Most supervisors and students reported that this practice was being followed.

(7) The original SOJET program was incomplete in that procedures for providing feedback to course developers and to program managers had not been developed at the time the program was implemented. As part of this effort procedures for additional feedback reports were prepared. When implemented these procedures will generate reports dealing with (a) student profiles, (b) subcourse cost effectiveness, and (c) rate of subcourse utilization and test submission. These are in addition to an item analysis report now prepared by IPD. Such reports will provide valuable information to course developers.

(8) Considerable emphasis was placed on identifying the probable impact of personnel turbulence upon student progress in SOJET program courses. Interviews with field personnel suggested that the turnover rate within battalion S2 and S3 sections is exceptionally high. A telephone survey of active Army units within CONUS indicated that most SOJET program students and supervisors can expect to be reassigned after six to nine months on the job. Analysis of training records revealed that active Army students had a lower program completion rate than did students from National Guard (NG) or U. S. Army Reserve (USAR) units. However, in terms of percentage of program completed, active Army students completed a much higher percentage of their enrolled-for program than did NG/USAR students.

On the basis of these findings, it was concluded that personnel turbulence did have a negative impact on the progress of active Army students and on course completion rates. This impact probably was intensified by the nature of SOJET course material, which is duty position-oriented. When a person is assigned to a new duty position there is little incentive to continue in the SOJET program. On the other hand, it was noted that the task-oriented, duty position-oriented nature of SOJET lesson material increases the likelihood that students will benefit from study of selected subcourses even though they may never complete an entire SOJET course.

(9) A cost comparison of the SOJET program with the procedures used to centrally administer correspondence courses revealed that the SOJET program costs 32% more to administer. A considerable portion of the increased cost is due to the need to mail tests and test scoring guides for each SOJET subcourse to a course supervisor. It was concluded that the bulk of these higher costs would be incurred by any program that depended on field personnel to administer and score tests.

(10) It was estimated that the extra cost of using SOJET procedures (as opposed to traditional procedures) to manage the 16 SOJET program courses for one year would be $6,288, assuming an annual enrollment of 600 students. In view of this estimate, plus the finding that there is a perceived need for SOJET instructional material, it was concluded that ACCP should continue to offer all SOJET courses, and that the courses should be administered by SOJET procedures (revised) at least through calendar year 1980. Also, it was concluded that cost considerations should not deter application of the SOJET program to a select group of courses where the administration and scoring of performance tests by a course supervisor is appropriate. It was noted also that the task-oriented, self-contained nature of SOJET lesson material makes that material especially applicable for high personnel turbulence duty positions--a student can benefit from study of one or a few subcourses even though he may not have an opportunity to complete an entire course.

EVALUATION AND DESIGN OF A PROTOTYPE SYSTEM FOR MANAGEMENT OF SUPERVISED ON-THE-JOB EXTENSION TRAINING PROGRAM (SOJET)

CONTENTS

TABLES AND FIGURES

TABLES

FIGURES

FIGURES

EVALUATION AND DESIGN OF A PROTOTYPE SYSTEM FOR MANAGEMENT OF SUPERVISED ON-THE-JOB EXTENSION TRAINING PROGRAM (SOJET)

I. OBJECTIVES

During the spring of 1978 the U.S. Army began an extensive field test of a new way of delivering duty-position training to a unit in a non-resident mode. This program was known as the Supervised On-the-Job Extension Training (SOJET) program. The delivery system for the program contained features that differed considerably from those used with traditional correspondence courses.[1] There was a need, therefore to evaluate the cost effectiveness and the acceptability of those features and to revise them as appropriate.

When the SOJET program was initially implemented, certain portions had to be administered on a "management by exception" basis, using specially developed procedures. There was a need to redesign these procedures to make them compatible with the new information management system to be adopted by the Institute for Professional Development (IPD), the agency responsible for administering the Army Correspondence Course Program. In addition, a system for providing feedback to course developers and managers had not been designed.

The present study was undertaken to evaluate the delivery system for the SOJET program and to complete the design of that system. The technical objectives of the study were to: (a) conduct a formative evaluation of the prototype extension training program, and (b) complete the design of an extension training management system for the centralized administration and delivery of performance-oriented extension training.

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[1]Throughout this report "traditional correspondence course" refers to courses which are MOS rather than duty-position oriented, and do not require the support of a registered course supervisor. Also, most "traditional" correspondence courses employ paper and pencil knowledge tests which are centrally scored, require students to study lesson material in a set sequence, and send to the student only a few subcourse lesson packets at any one time.

II. THE SOJET PROGRAM

A. PROGRAM OBJECTIVES AND OPERATIONAL APPROACH

The SOJET training delivery system is based on five system objectives, which in turn are based on Army training policy and/or training technology practices that are considered to promote effective training. These five system objectives are listed in Figure 1, along with the one or more operational approaches taken to implement each objective.

A basic tenet of the SOJET program is that the supervisor must be recognized as having responsibility for the training of those under his/her supervision. All Army supervisors have this responsibility but in many instances it is not actively exercised. The SOJET program required supervisors to take an active role in the training of their personnel. For example, in the traditional correspondence course program, the student is responsible for enrolling in the course and pursuing his study. In the SOJET program, the course supervisor is responsible for helping the student identify his training requirements and for administering and scoring tests. To emphasize the nature of this responsibility the supervisor is required to register by name along with the student. Also, subcourse tests are sent directly to the course supervisor.

In the absence of duty-oriented lesson material supervisory personnel are required to provide on-the-job training as best they can. Often the supervisor must devise a course of study, actually serve as a tutor, and maintain student training records. Those supervisors who conscientiously fulfill their training responsibilities often spend considerable time in conducting on-the-job training. The SOJET program was designed in recognition of the need to reduce these time demands. To accomplish this the SOJET program provides (a) a tool, a student training plan, which can be used to identify job requirements and student training requirements; (b) high quality, self-study lesson material keyed to tasks actually performed on the job; (c) procedures for maintaining training records centrally.

Within units some mechanism is needed whereby persons can study or refamiliarize themselves with a task before they must perform it. In the SOJET program, this unit need is met by providing a "one-shot" mailing of all subcourses requested by the student. The supervisor and the student are then free to study the course material in the sequence which best meets their unit needs. To accomplish this the subcourses had to be constructed so that they were self-contained training packages requiring no prerequisite training.

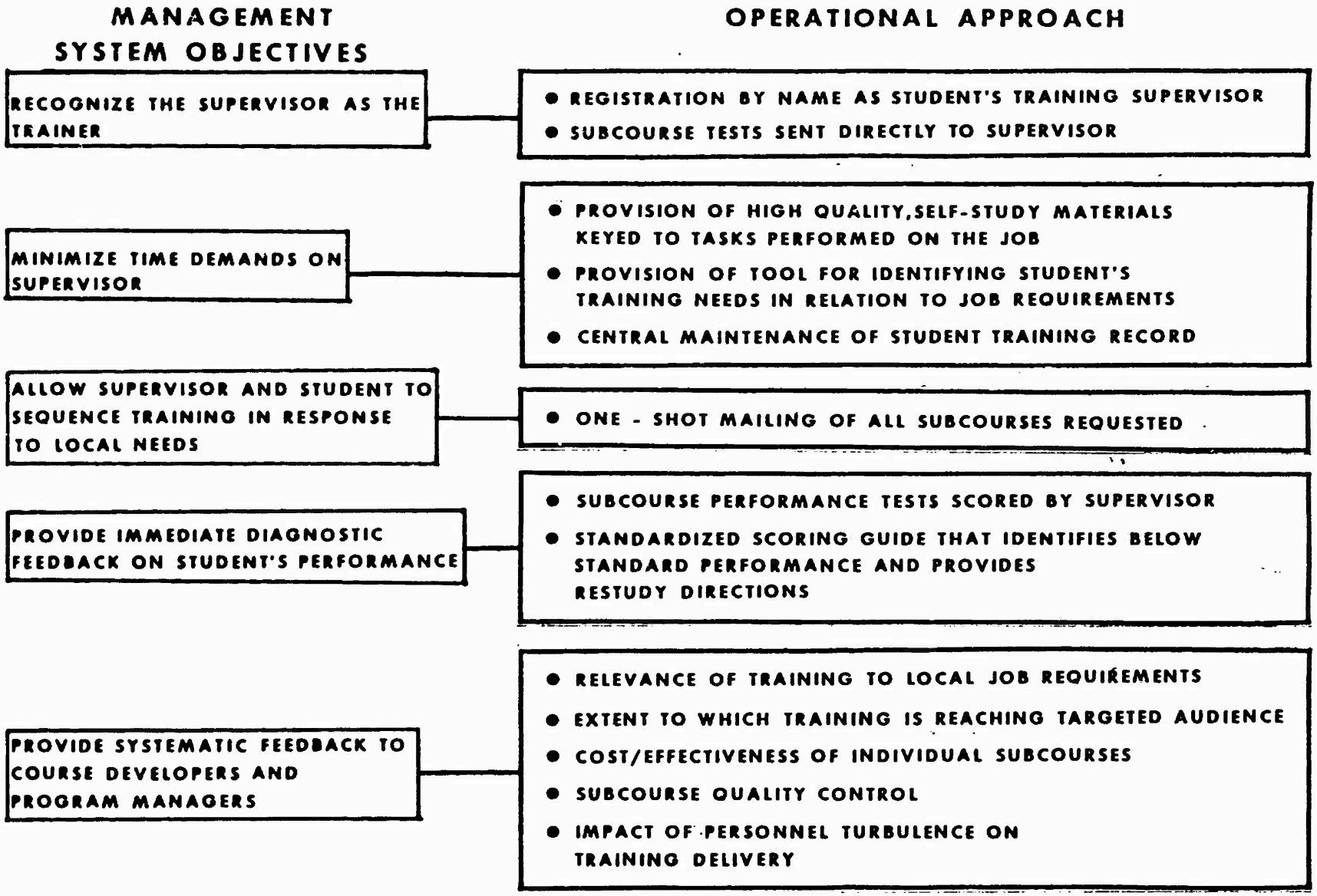

Figure 1. SOJET Program Management System Objectives and Operational Approach

Training technology research has demonstrated conclusively that learning is promoted by providing immediate feedback to the student. In the traditional correspondence course a student takes an examination, the examination is centrally scored, and some four to six weeks later the results are forwarded to the student. In the SOJET program the supervisor administers performance tests and then immediately scores and reviews the test results with the student. The supervisor explains the nature of any test errors and directs the student to restudy those portions of the lesson material dealing with the requirements he did not pass on the test. To accomplish this system objective, the subcourse performance test is designed so that it can be scored by supervisors. In addition, a standardized scoring guide was developed for each subcourse. This guide identifies correct re-sponses, prescribes minimum performance standards, and provides directions for restudy.

The administration of a correspondence course program is a complicated process requiring a considerable amount of feedback. The Institute for Professional Development (IPD) prepares a number of management reports of interest to program managers. However, with the exception of an item analysis report, IPD does not produce reports that are of interest to course developers. As shown in Figure 1, some of the reports that would be useful to both course developers and program managers would deal with such topics as (a) the relevance of training to local job requirements, (b) the extent to which training is reaching the target audience, (c) the cost effectiveness of individual subcourses, (d) subcourse quality control, and (e) the impact of personnel turbulence on training delivery.

B. PROGRAM CONTENT AND ORGANIZATION

The sixteen SOJET courses developed to date are directed to operations (S2) and intelligence (S3) enlisted personnel duty positions, within combat arms battalions. These positions were selected as the vehicle for the program because many persons assigned to battalion S2 or S3 positions have not had the opportunity to take formal instructions in operations or intelligence-related tasks.

The typical organization of a SOJET course is shown in Figure 2. Some subcourses cover tasks that are common in all types of battalions. Also, there are a number of special subcourses unique to one of the four combat arms branches. As a further illustration, the operations sergeant/assistant operations sergeant lesson material is packaged into four courses (Y01-Y04), a separate course for each of the four combat arms branches(Table 1). Fourteen core subcourses are common to each of the four combat arms branches. In addition, there are two or more special subcourses for each branch. Thus, a person enrolling for the armor operations sergeant course (Y01) enrolls for a total of 19 subcourses.

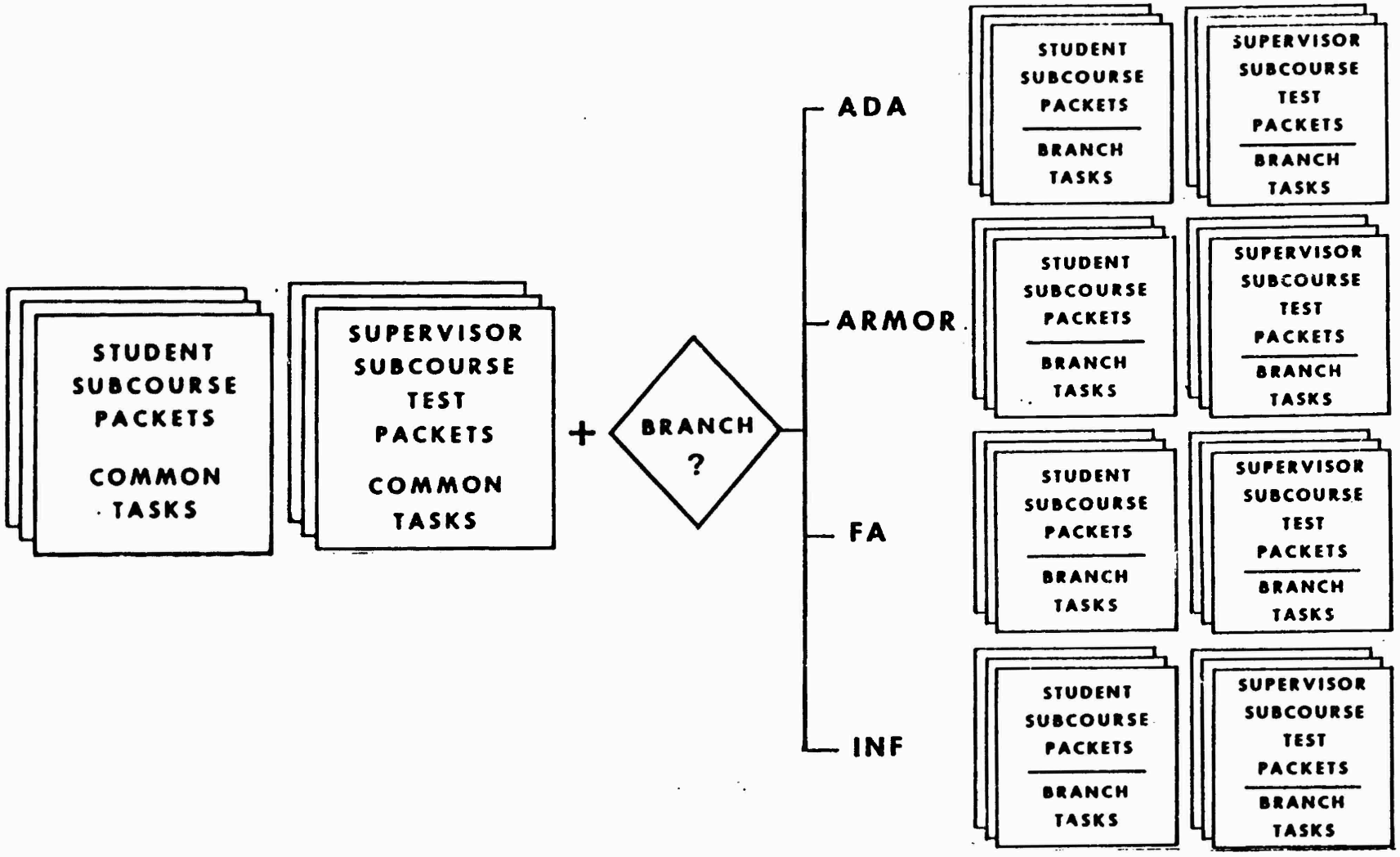

Figure 2. Organization of SOJET Course Material

TABLE 1

SUBCOURSES AND STUDENT CREDIT HOURS FOR
SOJET OPERATIONS/INTELLIGENCE COURSES

COURSE	AIR DEFENSE ARTILERY	ARMOR	FIELD ARTILLERY	INFANTRY
OPERATIONS SERGEANT/ ASSISTANT OPERATIONS SERGEANT				
Course Number (Student Lesson Packets)	Y04	Y01	Y03	Y02
Number of Core Subcourses (for all Combat Arms)	14	14	14	14
Number of Special Subcourses (specific to a Branch)	5	5	4	2
Total Number of Subcourses	19	19	18	16
Total Student Credit Hours	53	48	49	51
INTELLIGENCE SERGEANT/ ASSISTANT INTELLIGENCE SERGEANT				
Course Number (Student Lesson Packets)	Y08	Y05	Y07	Y06
Number of Core Subcourses (for all Combat Arms)	11	11	11	11
Number of Specific Subcourses (specific to a Branch)	5	4	5	3
Total Number of Subcourses	16	15	16	14
Total Student Credit Hours	39	32	35	34
OPERATIONS ASSISTANT/ SPECIALIST				
Course Number (Student Lesson Packets)	Y12	Y09	Y11	Y10
Number of Core Subcourses (for all Combat Arms)	4	4	4	4
Number of Special Subcourses (specific to a Branch)	6	0	0	1
Total Number of Subcourses	10	4	4	5
Total Student Credit Hours	44	19	19	25
INTELLIGENCE ASSISTANT/ SPECIALIST				
Course Number (Student Lesson Packets)	Y16	Y13	Y15	Y14
Number of Core Subcourses (for all Combat Arms)	7	7	7	7
Number of Special Subcourses (specific to a Branch)	6	0	0	1
Total Number of Subcourses	13	7	7	8
Total Student Credit Hours	48	23	23	25

As shown in Figure 2, subcourse material is organized into two packets. The student packet contains lesson material and practical exercises. The supervisor's test packet contains pretest material, posttest material, scoring instructions, and instructions and forms for recording test results and forwarding them to the Institute of Professional Development.

C. PROGRAM IMPLEMENTATION

The SOJET program was implemented on an experimental basis during the spring of 1978. To hasten the process of implementation and to assure that suitable numbers of students would be available during the program evaluation phase of the implementation, an extensive publicity campaign was conducted beginning early in 1978. The availability of the SOJET program was announced in Combat Arms School publications and a "GREEN publicity package" was sent to all battalions in the active Army, Army Reserves, and National Guard. Beginning in May 1978, program enrollment applications were accepted.

Persons responding to this publicity were sent a "Supervisor's Guide" which contained information about the program, and instructions and forms for enrolling. A revised version of this document, now called a "Course Guide," is contained in Annex A.

III. EVALUATION AND REVISION METHODOLOGY

The evaluation, revision and design activities engaged in during this study are shown in Table 2. These activities consisted of:

- o Determination of field acceptance of the SOJET program
- o Evaluation of the administrative feasibility of the SOJET program delivery system
- o Evaluation of student progress
- o Determination of SOJET program costs
- o Development of revisions to program delivery procedures
- o Development of improved feedback procedures

Each of these activities is described in more detail on the following pages.

A. FIELD ACCEPTANCE

Information on field acceptance of the program was obtained from on-site interviews at Army posts and from three surveys conducted by mail.

Field Visits. From November 1978 through March 1979, on-site interviews were held at five installations--Forts Campbell, Hood, Riley (two visits), Sill, and Stewart. During these visits three groups of persons were interviewed: enrolled students and registered supervisors, potential students and supervisors who had requested information about the program, and potential students and supervisors who were unfamiliar with the program.

The purpose of these interviews was to determine receptivity to the program by potential students and supervisors, the impact of course publicity on enrollment, and the acceptance of various features of the program's delivery system. The structured interview used during these visits is contained in Annex A. The categories and numbers of persons interviewed are shown in Table 3, and the interview data are summarized in Annex A.

Survey of Enrolled Students and Registered Supervisors in National Guard and Reserve Units (1st Survey). As a supplement to

TABLE 2

SUMMARY OF PROGRAM EVALUATION, REVISION AND DESIGN ACTIVITIES

Activity	Data Collection Methods	Data Sources	Date(s) of Activity
I Determination of Field Acceptance	o Field Visits (CONUS) o Surveys: o 1st	o Active Army Personnel o USAR enrolled students/ registered supervisors	o Nov 78 - March 79 o Jan 79
	o 2nd	o Potential students and course supervisors	o Feb - Jul 79
	o 3rd	o All AA and USAR/NG students/supervisors	o Aug 79
II Analysis of Student Progress	o Analysis of Training Records	o Student test data	o July - Aug 79
III Evaluation of Administrative Feasibility of SOJET Program	o Interviews	o IPD Personnel	o Throughout 1st 9 months of project
	o All 3 surveys	o Actual & Potential students & supervisors	o Jan-Sept 79
IV Analysis of SOJET Program Costs	o Analysis of a. work records b. printing costs c. mailing costs	o IPD personnel & records	o July-Sept 79
V Revision of SOJET Delivery Procedures	o Interviews o Survey data analysis	o IPD & ARI personnel o All survey respondents	o May-Sept 79 o May-Sept 79
VI Development of Improved Feedback Procedures	o Interviews	o IPD personnel & course developers	o July-Sept 79
	o Analysis of: IPD mgt. reports; enrollment & test-recording forms	o Enrolled students & registered supervisors	o July-Sept 79
VII Design of Admin. Compatible with IMIS[a]	o Interviews	o IPD personnel	o Jan-Sept 79

[a] IMIS = Instructional Management Information System

TABLE 3

SOURCES OF INTERVIEW AND SURVEY DATA

Data Source	Field Visit Interviews (Nov. 79) Mar. 79) Active Army Personnel	1st Survey (Jan. 79) NG/ USAR[c] Personnel	2nd Survey (Feb.-Jul. 79) Persons Requesting Information About Program	3rd Survey (Aug 79) Active Army Personnel	3rd Survey (Aug 79) NG/ USAR Personnel
Enrolled students	13[a]	38[b]	-	20	65
Registered supervisors	6	32	-	29	57
Persons requesting program information but not yet enrolled or registered	35	-	46	-	-
Potential students	58	-	-	-	-
Potential supervisors	148	-	-	-	-

[a]Number of persons interviewed
[b]Number of survey respondents
[c]National Guard/U.S. Army Reserve

the field visits, questionnaires were developed to obtain data from students and course supervisors who were members of the National Guard or U.S. Army Reserve. These questionnaires (Annex A) were sent to all NG/USAR personnel who were in the SOJET program as of 1 January 1979--137 enrolled students and 67 registered supervisors. The rates of return from enrolled students and registered supervisors were 28% and 47%, respectively. The data obtained are presented in Annex A.

Survey of Persons Who Had Requested Information on the Program but Had Not Enrolled/Registered (2nd Survey). Before and during field tests on the SOJET OPS/INTEL program, the program was publicized in various ways. As a consequence many persons requested information about the program, and were sent a Supervisor's Guide packet. If these persons did not enroll as students or register as course supervisors within two months, they were sent a questionnaire (Annex A). The purpose of the questionnaire was to (a) obtain reader reaction to the program as described in the Program Supervisor's Guide, and (b) obtain information about enrollment intentions. This questionnaire was sent to 95 persons and the rate of return was 49%. The data obtained are presented in Annex A.

Survey of Enrolled Students and Registered Supervisors (3rd Survey). During August 1979, questionnaires were mailed to all active Army enrolled students and registered supervisors and a large sample (about two thirds) of the enrolled students and registered supervisors who were members of the National Guard or Army Reserve. The general purpose of these questionnaires (Annex A) was to collect a variety of data bearing on acceptance of the program's delivery system, course content, and test scoring procedures. Questionnaires were sent to 153 active Army students, 103 active Army supervisors, 300 NG/USAR students, and 200 NG/USAR supervisors. The rates of return for these four groups were 13, 28, 22, and 29 percent, respectively. The data obtained are discussed later in this report.

B. STUDENT PROGRESS

The extent to which students actively participate in a training program can be used as a measure of field acceptance of the program. Special procedures had been developed to manage the central administration of the SOJET program during its initial implementation. This was necessary because much of the data collected as part of the SOJET program could not be processed using IPD data files and computer programs. These procedures included the collection and storage of training data; training records were maintained on special OPS/INTEL program files. These records were analyzed to develop data on such matters as rate of student progress, student drop-out rates, course completion rates, and the ratio of enrollment to actual starts in the

program. The findings from this analysis are presented in Section IV of this report.

C. ADMINISTRATIVE FEASIBILITY/PROBLEMS

One of the purposes of this study was to evaluate the SOJET program delivery system, to identify problems with it, and when feasible, to immediately implement solutions to these problems. Problems experienced or anticipated by unit personnel, especially registered or potential course supervisors, were identified during the field visits and during the first two surveys.

A second set of problems investigated were those experienced by persons responsible for the central management of the SOJET program. Appropriate staff members of the Institute for Professional Development were interviewed, and through extensive discussions, a number of administrative problems were identified.

Solutions to some of these problems were implemented in the summer of 1979. Solutions to other problems were incorporated in procedures in the SOJET Program Implementation Handbook (Appendix B).

D. COST OF SOJET PROGRAM

To determine the cost of the SOJET program, costs for administering the entire SOJET program had to be estimated. These estimates were constructed by first obtaining cost data for the administrative elements comprising the delivery system for the typical correspondence program. Most of these estimates had already been developed by IPD and were described on recently prepared "Schedule Xs." These schedules show the work elements of a major operation and provide detailed cost estimates for each element and operation. The schedules are used for budget planning.

Each administrative work element for a traditional correspondence course was then reviewed and cost, personnel, or time requirements were adjusted to reflect SOJET program procedures as described in the SOJET Program Implementation Handbook (Annex B). IPD personnel familiar with current SOJET administrative procedures cooperated in this casting exercise.

E. REVISION OF SOJET DELIVERY SYSTEM

Throughout the first nine months of this project, there was a continuing effort to identify administrative problems that could be

revised immediately. Discussions with IPD personnel and an analysis of interview and questionnaire data resulted in identification of a number of problem areas. These areas were reviewed with IPD and ARI personnel to specify the problems for which solutions could be developed and implemented without delay. Most of these revisions involved simplifying procedures or program information and enrollment material. These revisions were made by the contractor, reviewed by IPD and ARI, and then implemented during August 1979.

F. FEEDBACK SYSTEM DESIGN

The present management system for Army correspondence courses produces a number of monthly reports of use to program managers. However, with one exception, a subcourse test item analysis report, IPD prepares no management reports for the specific use of course developers. One of the primary purposes of this project was to design an improved feedback system for program managers and especially for SOJET course developers. This was accomplished as follows. First, a determination was made of the decisions that must be made by program managers and by course developers. These decisions were identified through discussions with IPD personnel and telephonic discussions with course develoers at the combat arms schools. Contractor personnel then reviewed each decision area and identified the major informational inputs required to make a decision. Thirdly, the Contractor examined IPD management reports and data files, and identified the information IPD currently can provide in support of the major decisions which must be made by program managers and by course developers. During this activity enrollment forms and training records were analyzed to determine the data captured by such forms and records. A comparison of information requirements with current information collecting/generating capabilities resulted in the identification of a number of information gaps--information that should be collected or generated in order to provide course developers with a sound basis for decision making. As a final step, proposed changes in enrollment forms were developed, and a number of new types of feedback reports to course developers were proposed. These are discussed in Section VI of this report and in ANNEX B to the report.

G. DESIGN OF ADMINISTRATIVE SYSTEM COMPATIBLE WITH INSTRUCTIONAL MANAGEMENT INFORMATION SYSTEM (IMIS)

Correspondence courses currently are managed by the U.S. Army Training and Doctrine Command (TRADOC) educational system for nonresident instruction (TREDS-NRI). This system is somewhat obsolete and does not have the capability to handle anticipated correspondence course requirements in the 1980 time frame. Consequently, the system

is being revised. The new system, currently known as the Instructional Management Information System (IMIS), will be available within two years. This new system will be capable of storing considerably more data and will have an expanded data processing capability IPD is scheduled to acquire its own computer facility in support of this new system.

Currently, certain portions of the SOJET program are being managed "by exception." That is, special computer-based files are used to store and process certain types of SOJET program data which cannot now be processed by the TREDS-NRI system. One purpose of this project was to eliminate the need for those special programs and files; the goal was to design an administrative system that can be handled by the new IMIS. Since IMIS will not be operational for about two years, its capabilities and the programs that will be used with it had to be estimated for the purposes of this project. The final design of the SOJET administrative system was adjusted so that it was compatible with the estimated IMIS capabilities. To accomplish this, the functional requirements of the SOJET administrative system were identified, then reviewed with persons responsible for development of IMIS. The final version of the SOJET administrative system thus was designed so that it can be handled by IPD's future educational management information system--IMIS.

IV. DESCRIPTIVE FINDINGS

A. PROGRAM PUBLICITY AND ENROLLMENT

Implementation of the SOJET program began early in 1978. To announce the availability of the program, a short description was mailed to all Army, National Guard, and U.S. Army Reserve battalions. Also, articles announcing that the program was available were published in school newspapers. Application for enrollment into the program began to be accepted during May 1978.

As of the end of October 1979, 728 students had been enrolled, 498 of whom were from National Guard or Reserve units. As shown in Figure 3, the rate of enrollment for active Army personnel was very slow until Janury 1979.

On-site interviews conducted at state-side Army installations during the fall and early winter of 1978 indicated that the publicity had not been effective. Over half of those persons eligible for enrollment were not aware of the program (Table B-8, Annex A). As the result of this finding and the low enrollment rate of active Army personnel, an intensive publicity campaign was begun in December 1978. Messages were sent to all battalion commanders announcing the availability of the program; a description of the program was mailed to the commanding officer of all battalion intelligence (S2) and operations (S3) sections; additional articles about the program were prepared for School papers; and overseas radio spots were prepared.

As the result of this campaign, enrollment of active Army personnel began to increase and currently is rising at the rate of about 25 students per month. However, even after this additional publicity, over 60% of the persons interviewed during February-March 1979 still were not aware of the SOJET OPS/INTEL program (Table B-8).

The somewhat unusual publicity campaign was undertaken to encourage enrollment in the program as rapidly as possible, so that numbers of students would be adequate for a beginning on evaluation of the program. In the intervening months, availability of the SOJET operations and intelligence courses has been announced in appropriate School catalogs and the courses have been referenced in appropriate Soldier's Manuals. These catalogs and Soldier's Manual listings should be sufficient to maintain the rate of enrollment at its current level.

B. TARGET AUDIENCE VERSUS STUDENT PROFILE

The SOJET program is unusual in that there are no restrictions on who can enroll in the program. However, the operations and intelli-

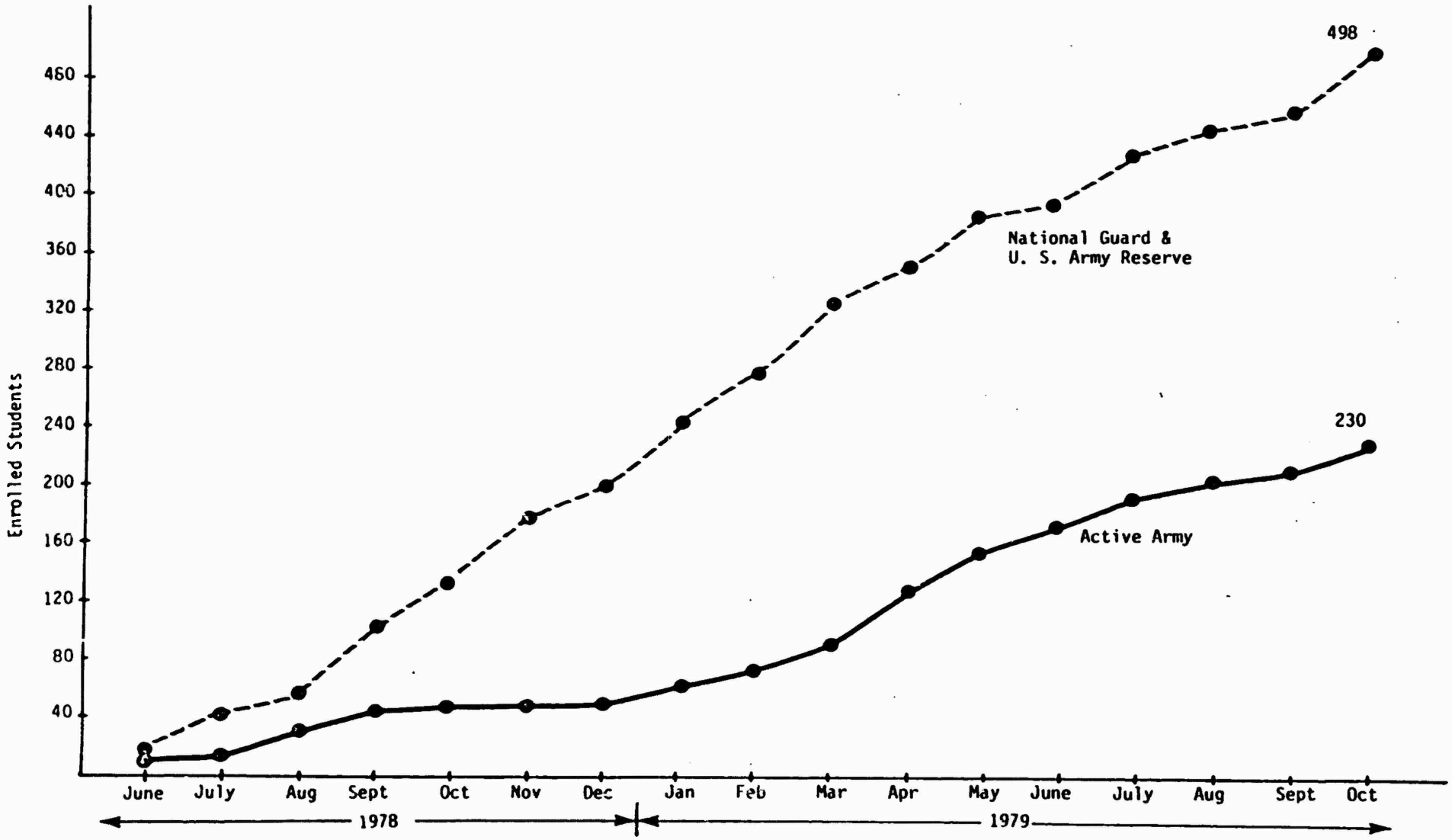

Figure 3. Cumulative Number of Accepted Enrollment

gence courses were designed primarily for enlisted personnel assigned to combat battalions. The duty-oriented nature of the course material makes the courses most appropriate for persons now in operations or intelligence duty positions or aspiring to such positions.

The characteristics of persons enrolled in the SOJET program are shown in Figure 3 and in Tables 4 through 7.[1] Most SOJET program enrollees (78%) were members of the National Guard or of Reserve Units. However, from March through October 1979 almost equal numbers of active Army and National Guard/Reserve students enrolled in the Program.

Eighty percent of the enrollees held a current operations or intelligence duty assignment (Table 4). Moreover, persons currently assigned to operations (S3) duty positions tended to enroll in one of the eight operations courses while persons currently assigned to intelligence (S2) duty positions tended to enroll in one of the eight intelligence courses (Table 4). Also, persons currently assigned to a sergeant or assistant sergeant duty position usually enrolled for one of the eight senior courses while persons currently assigned to assistant or specialist positions enrolled in one of the eight junior courses (Table 4). Most of the persons currently assigned to non-operations or intelligence positions enrolled in one of the operations sergeant courses.

Seventh-three percent of all enrollees were NCOs at the 3, 4 or 5 skill level (Table 5). This seems to reflect the fact that for a number of MOSs persons have to obtain a fairly senior rank before there is a requirement for them to learn S2 or S3-related tasks.

Eighty-seven percent of the students held a combat MOS (Table 6). The largest group of enrollees (30%) held an infantry MOS while an additional 22% held a field artillery MOS. Most students who held a non-combat MOS held an MOS in the intelligence area.

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[1]Detailed versions of these tables are located in Appendix A.

TABLE 4

DISTRIBUTION OF ENROLLMENTS IN TERMS OF CURRENT DUTY POSITION[a]

Course	Component	CURRENT DUTY POSITION					Total
		OPS SGT/ ASST OPS SGT	INTEL SGT/ ASST INTEL SGT	OPS ASST/ SPEC	INTEL ASST/ SPEC	NON OPS/ INTEL POSITIONS	
OPS SGT (Y01-Y04)	AA	54	2	-	-	36	92
	NG/USAR	148	11	4	-	46	209
INTEL SGT (Y05-Y08)	AA	1	24	-	1	9	35
	NG/USAR	4	82	6	1	0	99
OPS SPEC (Y09-Y12)	AA	1	1	23	3	3	31
	NG/USAR	2	-	35	8	9	54
INTEL SPEC (Y13-Y16)	AA	-	-	1	7	5	13
	NG/USAR	-	4	3	19	3	29
Selected Sub-Courses[b] (Y01-Y16)	AA	12	8	2	1	4	27
	NG/USAR	20	11	1	9	4	45
Total	AA	68	35	26	12	57	198
	NG/USAR	174	108	49	37	68	436

[a]Enrollment as of 1 September 1979

[b]Persons who enrolled in less than a full course

TABLE 5

DISTRIBUTION OF ENROLLMENTS IN TERMS OF CURRENT SKILL LEVEL[a]

Course	Component	Current Skill Level 1	2	3	4	5	Unknown	Total
OPS SGT (Y01-Y04)	AA	3	11	19	50	7	2	92
	NG/USAR	3	7	34	70	88	7	209
INTEL SGT (Y05-Y08)	AA	1	5	15	9	2	3	35
	NG/USAR	-	3	23	32	39	2	99
OPS SPEC (Y09-Y12)	AA	25	5	1	-	-	-	31
	NG/USAR	23	12	11	2	1	5	54
INTEL SPEC (Y13-Y16)	AA	10	1	2	-	-	-	13
	NG/USAR	6	14	8	1	-	-	29
Selected Sub-Courses[b]	AA	6	6	4	3	5	3	27
	NG/USAR	3	5	3	13	20	1	45
Total	AA	45	28	41	62	14	8	198
	NG/USAR	35	41	79	118	148	15	436

[a]Enrollment as of 1 September 1979

[b]Persons who enrolled in less than a full course

TABLE 6

DISTRIBUTION OF ENROLLMENTS IN TERMS OF CURRENT MOS[a]

Course	Component	Combat MOS[c] AR	INF	FA	ADA	Non-Combat MOS[c] ENG	INTEL	ORD	OTHER	UNK	Total
OPS SGT (Y01-Y04)	AA	9	31	36	10	3	-	-	1	2	92
	NG/USAR	46	71	42	5	7	7	11	15	5	209
INTEL SGT (Y05-Y08)	AA	3	15	4	5	6	2	-	-	-	35
	NG/USAR	38	22	22	1	-	12	2	1	1	99
OPS SPEC (Y09-Y12)	AA	-	10	2	10	-	4	2	3	-	31
	NG/USAR	14	20	6	3	1	2	2	2	4	54
INTEL SPEC (Y13-Y16)	AA	-	-	2	4	-	6	-	-	1	13
	NG/USAR	2	4	4	1	-	16	-	2	-	29
Selected Sub-Courses[b]	AA	-	13	3	8	-	1	-	2	-	27
	NG/USAR	6	7	19	2	1	1	2	7		45
Total	AA	12	69	47	37	9	13	2	6	3	198
	NG/USAR	106	124	93	12	9	38	17	27	6	436

[a]Enrollment as of 1 September 1979

[b]Persons who enrolled in less than a full course

[c]AR = Armor, INF = Infantry, FA = Field Artillery, ADA = Air Defense Artillery, ENG = Engineering, INTEL = Intelligence, and ORD = Ordnance

As expected, many students had been in their current duty position for a short period of time. Thirty-nine percent and twenty-nine percent of active Army and NG/USAR students, respectively, had held their present duty position for six moths or less (Table 7). On the other hand, 78% and 82%, respectively, of active Army and NG/USAR students had a total of seven or more months in all operations or intelligence assignments. This finding suggests that most students were fairly familiar with operations or intelligence tasks.

The foregoing profile data suggest that the SOJET program was reaching an appropriate target audience. The typical SOJET student was: a senior NCO, enrolled in a course appropriate to his duty position, held a combat MOS, and had less than 12 months of experience in his present duty position. In recent months about 50% of the students were members of the active Army.

C. STUDENT PROGRESS

As of 1 September 1979 six hundred and thirty-four (634) students had been accepted into the SOJET program. The training status of these students as of 21 September 1979 is shown in Table 8. In addition to showing the training status of Active Army (AA) and National Guard/USAR students, this table shows the training status of students who enrolled at different time intervals. These groups will be called "classes". Class 1 consists of students who enrolled during May-June 1978. Class 2 students enrolled during July-August 1978. Students who enrolled during July-August 1979 are referred to as "Class 8". Percentages calculated on the basis of total enrollment show that program completion rates were low for both active Army (6%) and NG/USAR (10%) students. Program completion rates did improve somewhat for those classes of students which have been in the program a longer period of time. Table 8 shows also that many students had never submitted a test ever though they had been enrolled in the program for a considerable length of time. It should be noted also that participation by National Guard and USAR students was greater than for active Army students both in terms of the actual number of persons who enrolled ir the program (437 versus 198) and the percent of students who were active to some degree in the program (49 % versus 30%).

Table 9 shows the percent of students active during various time periods following enrollment. For this table, "active" is defined as the submission of a test for a new subcourse; the test may be a passing or failing one. The numbers displayed in Table 9 indicate that a lower percent of active Army students submitted subcourse tests than did NG/USAR students.

As noted earlier, most students enrolled in either the OPS SGT or the INTEL SGT courses. For these two sets of courses Table 9 shows

TABLE 7

DISTRIBUTION OF ENROLLMENTS IN TERMS OF MONTHS IN CURRENT DUTY POSITION, AND MONTHS IN ALL OPERATIONS OR INTELLIGENCE DUTY ASSIGNMENTS

Duty Time in Months	Months in Current Position		Months in All OPS/INTEL Duty Assignments	
	AA (N = 198)	NG/USAR (N = 436)	AA (N = 198)	NG/USAR (N = 436)
1 - 6	39%	29%	22%	18%
7 - 12	28%	24%	22%	17%
13 - 18	16%	12%	13%	10%
19 - 24	9%	9%	7%	8%
25 - 36	4%	9%	12%	11%
37 - 48	-	4%	4%	8%
49+	-	7%	12%	21%
Unknown	4%	6%	8%	7%

TABLE 8

TRAINING STATUS OF ALL STUDENTS AS OF 1 SEPTEMBER 1979

Training Status	Number of Months Since Enrollment														TOTAL	
	15-16		13-14		11-12		9-10		7-8		5-6		3-4		1-2			
	AA	USAR/NG	AA	USAR/NG	AA	USAR/NG	AA	USAR/NG	AA	USAR/NG	AA	USAR/NG	AA	USAR/NG	AA	USAR/NG	AA	USAR/NG
Class #	1		2		3		4		5		6		7		8			
N	4	18	15	46	21	66	8	60	22	78	52	69	49	57	27	42	198	436
Completed Program	-	28%	7%	24%	24%	15%	-	3%	9%	6%	2%	12%	2%	4%	4%	-	6%	10%
Terminated Program	-		7%	-	-	-	13%	-	-	1%	-	-	-	-	-	-	1%	-
Continuing Program	25%	44%	13%	52%	10%	52%	13%	57%	23%	40%	29%	28%	24%	30%	26%	7%	23%	39%
No Test Yet Submitted	75%	28%	73%	24%	66%	33%	74%	40%	68%	53%	69%	60%	74%	66%	70%	92%	70%	51%

TABLE 9

PERCENT OF STUDENTS ACTIVE DURING VARIOUS TIME PERIODS FOLLOWING ENROLLMENT[a]

Course	Component	Time Interval in Months After Enrollment 1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16
OPS/INTEL Sgt Courses (Y01-Y08)	AA	26%	21%	14%	8%	9%	-	-	-
	NG/USAR	31%	30%	23%	22%	16%	14%	8%	8%
OPS/INTEL ASST/ SPEC Courses (Y09-Y16)	AA	14%	11%	4%	-	-	-	-	-
	NG/USAR	25%	20%	10%	9%	b	b	b	b
Persons Enrolled in Selected Subcourses	AA	36%	32%	10%	b	b	0	0	0
	NG/USAR	33%	26%	21%	37%	18%	18%	b	b

[a]Activity based on submission of a test, passing or failing, for a new subcourse
[b]Number of students too small to provide stable percent

that the highest percent of students were active during the first two months following enrollment. This suggests that most students, if they are going to participate at all in the program, begin their participation soon after receiving their lesson material. Table 9 shows also that after 6 months participation in the program drops to eight percent for AA students; for NG/USAR students this low level of participation is not reached until 12 months after enrollment. To anticipate the next section of this report, this last finding seems to be due to personnel turbulence within the active Army.

Table 10 shows the cumulative rate at which new subcourse tests were submitted following various periods after enrollment. This table is based on students who submitted at least one test, passing or failing. The data reveal that active Army students submitted many more tests than did NG/USAR students during the early part of their participation in the SOJET program. At the end of six months the average active Army student had submitted tests over approximately 12 different subcourses as compared with six subcourses for NG/USAR students. For operations and intelligence assistant/specialist courses this relationship held to a much lesser degree. For those students enrolled in selected courses only, the relationship was reversed--more tests were submitted by NG/USAR students than by active Army students.

The data contained in Tables 9 and 10 seemed to reflect, in general, the opportunities for self-study which exist within the active Army and within the National Guard/Reserves. Within the active Army a student can look forward to reassignment to a new duty position within a few months. Therefore, if he is to participate in a program he must begin his participation as soon as possible and proceed as rapidly as he can through his program of study. On the other hand, members of national guard and reserve units are most apt to participate in training programs as part of their schedule of monthly training activities. The data in Table 10 suggests also that students enrolled in the SOJET Program should be given longer than 12 months to complete their program. This appears to be especially true for national guard and reserve students.

The SOJET program places no restrictions on the number of subcourses a student can enroll for. A few students enroll for only one or two subcourses while a few others enroll for 30 or more subcourses. About 25% of the students will enroll for one of the 16 full courses plus a few additional subcourses of interest to them. For some students, therefore, the submission of tests over four different subcourses might mean that they have completed their total program of instruction. For other students a submission of this number of tests may mean that they have completed only 10 to 20% of their program.

TABLE 10

CUMULATIVE AVERAGE NUMBER OF NEW SUBCOURSE TESTS SUBMITTED FOLLOWING VARIOUS TIME PERIODS AFTER ENROLLMENT[a]

Course	Component	Time Interval in Months After Enrollment 1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16
OPS/INTEL Sgt Courses (Y01-Y08)	AA	5.33	10.39	11.51	12.32	13.32	13.32	13.32	13.32
	NG/USAR	2.01	4.72	6.21	7.05	7.90	8.67	9.08	9.53
OPS/INTEL ASST/SPEC Courses (Y09-Y16)	AA	2.89	3.89	3.97	3.97	3.97	3.97	3.97	3.97
	NG/USAR	1.32	2.53	3.24	4.38	4.63	4.88	4.88	4.88
Persons Enrolled in Selected Subcourses	AA	1.13	2.44	2.74	3.02	4.02	4.02	4.02	4.02
	NG/USAR	1.65	3.65	4.71	5.84	6.44	7.77	8.60	8.60

[a]Based on persons who submitted at least one passing or failing test

Table 11 shows the percent of program completed following various months after enrollment. Each percent figure contained in Table 11 is based on a different number of students, namely the number of active students still remaining in the program. Therefore, those percentages listed under intervals 13-14 and 15-16 (classes 1 and 2, respectively) are based on a very small number of students. The percentages displayed in Table 11 reflect the findings already discussed with respect to Table 10. After six months all participating active AA students had completed 57% of their program versus 34% for NG/USAR.

Collectively the data displayed in Tables 7 through 11 indicate that based on all enrollees: (1) only about 50% can be expected to actively participate in their program of instruction. The remainder will become "no-starts"; and (2) the percent of persons completing their entire program will be quite low, on the order of 10%.

Based on students who are active at some point in the program, student progress data suggests that (1) most students are active early in their program (Table 9); (2) most new subcourse tests will be submitted during the first six months of the program (Table 10); (3) the number of different tests submitted will be much higher for AA than for NG/USAR students (Table 10), and (4) of those students who participate at all in a program most of them will complete a high percentage of their instructional program (Table 11)." It seems reasonable to conclude that these people will derive considerable benefit from participating in the program.

D. IMPACT OF PERSONNEL TURBULENCE

In the SOJET program the requirement that the course supervisor administer and score subcourse examinations inevitably sets the stage for disruptions in student progress whenever the course supervisor is unavailable. Temporary unavailability may be caused by the supervisor being in the field, on TDY, or on leave. When the supervisor is reassigned to another job, undergoes a permanent change of station, or is discharged, the student will have to obtain a new course supervisor. Likewise, when the student is reassigned or sent to a new post, his new duties are very likely to conflict with, and may not even be relevant to, the SOJET course in which he is enrolled. Thus, he would have little incentive for continuing in the program; at a minimum he would have to arrange for a new course supervisor.

According to IPD estimates, personnel turnover within the active Army is about 25% per quarter. Based on information acquired from active Army personnel during the field visits conducted as part of this study, it is estimated that the annual turnover rate for enlisted and for officer personnel is at least 50% and 100%, respectively. In

TABLE 11

PERCENT OF PROGRAM COMPLETED AFTER VARIOUS TIME INTERVALS FOLLOWING ENROLLMENT[a]

Course	Component	Time Interval in Months After Enrollment 1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16
OPS/INTEL Sgt Courses (Y01-Y08)	AA	24%	49%	60%	68%	81%	86%	63%	38%
	NG/USAR	11%	25%	34%	36%	37%	43%	58%	64%
OPS/INTEL ASST/SPEC Courses (Y09-Y16)	AA	26%	34%	55%	b	-	-	-	-
	NG/USAR	11%	23%	29%	29%	22%	30%	b	b
Persons Enrolled in Selected Sub-courses	AA	7%	11%	19%	22%	b	b	b	b
	NG/USAR	13%	27%	32%	41%	56%	88%	b	b
All Students	AA	22%	45%	57%	63%	73%	81%	57%	38%
	NG/USAR	11%	22%	34%	36%	36%	44%	60%	66%

[a]Percent for each interval based on number of students who submitted at least one test and who could still be active at end of interval

[b]Number of students too small to provide stable percent

view of such estimates, there is a high probability that many of the potential "no-starts" and "drop-outs" reflected in the data presented in Table 8 are due to personnel turnover.

As a prelude to the third survey of this study, an effort was made to contact by telephone all active Army course supervisors assigned to a CONUS installation. From these telephone contacts, specific information was obtained on the present location of 104 of 111 enrolled students and 61 of 65 registered supervisors. This information is shown in Table 12.

Of the 104 students, 73 still were assigned to the unit they were in when they first enrolled in the SOJET program; however, 8 of the 73 were in the field, on TDY, or on leave. The remaining 31 persons were no longer in their original unit; most of them having been reassigned to another installation. Thus, it would appear that reassignment accounted for lack of participation by about 30% of the students.

Of the 61 course supervisors, 26 (43%) were no longer available to carry out their responsibilities as course supervisors; 12 had been reassigned to another job, 11 had undergone a permanent change of station, and 3 had been discharged.

In the SOJET program unavailability of either a student or a supervisor can disrupt student progress. From the telephone survey described, the status of 111 student-supervisor pairs was determined. These data are displayed in Table 13. Positive information was obtained on 100 student-supervisor pairs; for the other 11 pairs, the status of one or both parties was unknown. In those 100 pairs for which information was available, there were 47 pairs in which both the student and the supervisor were still assigned to the same unit they were in when they first enrolled/registered in the program. Although some of these people were on TDY or on leave, they were judged as being available to continue in the SOJET program. For the remaining 53 pairs, either the supervisor, the student, or both were away attending school, had been assigned to another job, had been assigned to another post, or had left the service. On the basis of the foregoing information, it is estimated that at least 50% of the students who enroll in the SOJET program and who are members of the active Army will have their program disrupted.

When a student is reassigned to a new job or undergoes a permanent change of station, he is temporarily disenrolled from the SOJET program. Once he is established in his new job or station, he has the option of re-enrolling in the program and continuing his course of study. This option is seldom exercised, probably because personnel often are temporarily assigned to in the S2 and S3 sections of a battalion until they are needed elsewhere; when they are reassigned, they

TABLE 12

STATUS OF ACTIVE ARMY STUDENTS AND COURSE SUPERVISORS (CONUS) AS OF AUGUST 1979

Status	Enrolled Students (N = 111)	Registered Supervisors (N = 65)
In Unit	65	25
In Field	5	4
On Leave	1	3
TDY	2	3
Reassigned	6	12
PCS	24	11
Discharged	1	3
Unknown	7	4

TABLE 13

STATUS OF STUDENT-SUPERVISOR PAIRS AS OF AUGUST 1979[a] (N = 111)

Supervisors	Students		
	Available	Not Available	Unknown
Available	47	17	1
Not Available	22	14	-
Unknown	4	--	6
Total	73	31	7

[a]Status as of 20 August 1979

have little reason to continue their S2 or S3 course of instruction unless they have an MOS in which operations or intelligence tasks are covered in their Soldier's Manual.

The data presented in Table 13 suggest that there is a relationship between the number of months since enrollment and turnover rates. Table 14 contains data bearing on this relationship. Examination shows that for the 47 pairs where both the supervisor and student were available, it had been an average of six months since enrollment in the SOJET program. For the 22 pairs in which the supervisor was gone but the student was still in the unit, the students had enrolled on an average of seven months earlier. For 17 additional student-supervisor pairs, the student was gone but the supervisor was present; those pairs had enrolled in the program approximately eight months earlier. Finally, for those 14 pairs where both the student and supervisor were gone from the unit, those pairs had enrolled an average of 10 months prior to the telephone survey. The foregoing data substantiate the obvious--the longer the period since enrollment into the SOJET program, the higher the probability that both the student and supervisor will no longer be assigned to the unit they were in when they first enrolled/registered into the program.

Another set of data bearing on personnel turbulence is displayed in Table 15. Three questions on personnel turnover from the supervisor questionnaire used for the third survey, are listed in Table 15, along with the percentage of persons who provided various responses to each question. In 58% or more of the cases, the supervisors stated that personnel turnover did not prevent students from enrolling in the program, prevent students from completing the program, or make supervisors reluctant to register in a program. This data supports the telephone survey findings--personnel turbulence may prevent 30-40% of enrolled students from completing this program. It also may prevent considerable numbers of potential students from enrolling in the program.

The impact of personnel turbulence on test submission rates also can be inferred from the data presented in Tables 9 and 10. Table 10 shows that the rate of test submission for active Army personnel was more rapid than that for NG/USAR personnel through the first four months of their enrollment. After six months, very few active Army students continued to submit tests while many NG/USAR students continued to do so. Based on the foregoing findings it seems highly probable that personnel turbulence had an adverse effect on student progress, especially within the active Army. Removing the requirement for a registered course supervisor might decrease this effect somewhat.

TABLE 14

PERSONNEL TURBULENCE OF STUDENT-SUPERVISOR PAIRS
AS RELATED TO MONTHS SINCE ENROLLMENT

Status of Student-Supervisor Pairs	N	Average Number of Months Since Enrollment
Both student and supervisor present	47	6 months
Supervisor gone, student present	22	7 months
Student gone, supervisor present	17	8 months
Both student and supervisor gone	14	10 months

TABLE 15

SUPERVISOR REPLIES TO QUESTIONS ABOUT

PERSONNEL TURNOVER[a]

Question	Component	N	Response Options Yes	Sometimes	No
Has personnel turnover:					
a. Prevented potential students from enrolling in the program?	AA	29	4%	35%	61%
	NG/USAR	53	13%	27%	60%
b. Prevented stgudents from completing program?	AA	29	8%	33%	58%
	NG/USAR	53	9%	22%	69%
c. Made you or others reluctant to register as a course supervisor?	AA	29	21%	21%	58%
	NG/USAR	53	11%	13%	76%

[a]Third Survey Data

E. COST COMPARISON OF SOJET AND IPD CENTRAL MANAGEMENT PROCEDURES

During this effort the absolute and comparative costs of administering a correspondence course by current IPD and by SOJET original and revised procedures were calculated. As a first step, the time needed to perform the tasks required of each IPD staff member was determined. A recent "Schedule X" (Workload Estimate Chart) prepared by IPD provided the task listings and time estimates for IPD procedures. These procedures were reviewed with IPD personnel and the time estimates for each task raised or lowered to reflect SOJET program procedures. Whenever possible, time estimates for tasks were based on actual work counts and/or on personnel observation. All time and non-labor cost estimates were derived so that they could be converted to "cost per enrolled student per year."

The entries in Table 16 illustrate how time requirements were calculated. IPD enrollment clerks are responsible for processing enrollment applications, a task that can be divided into five elements. Listed under IPD procedures (Table 16) are the estimates of the time required to perform each task element of the enrollment task. In the SOJET program, the original procedures involved processing two more enrollment forms than did IPD procedures, and one of these forms, the Student Training Plan, was time consuming to edit and code. On the other hand, the SOJET program has no eligibility requirements or equivalent credits, eliminating two steps in the enrollment process that must be followed under IPD procedures.

Table 16 shows that, following IPD procedures, it takes 8.25 minutes to process one enrollment application. The process requires 9.25 minutes per student when the original SOJET enrollment procedures are used. Using revised SOJET procedures, it takes about 7.5 minutes to enroll one student-supervisor pair.

To prepare estimates of annual manpower requirements, IPD converts "minutes to perform a task" into hours per year required to handle a full student complement. From July 1978 through June 1979, IPD processed 202,009 enrollment forms (DA Form 145). Thus, using IPD enrollment procedures an estimated 27,776 hours (202,009 x 8.25 minutes ÷ 60) were required in that year to process student enrollments.

Using procedures similar to those just described, IPD has calculated the hours required by each of its organizational elements to support 202,009 students (Table 17). The estimates were adjusted to reflect original and revised SOJET procedures. Of particular interest is the estimate that, for IPD and for revised SOJET procedures, the time required to process and to support one student is approximately 1.3 and 1.75 hours, respectively. Thus, revised SOJET procedures require almost 36% more labor than do current IPD procedures.

TABLE 16

TIME REQUIRED TO PERFORM ENROLLMENT TASK IN ACCORDANCE WITH IPD PROCEDURES, ORIGINAL SOJET PROCEDURES AND REVISED SOJET PROCEDURES (MINUTES)

TASK	Central Management Procedures				
	IPD[a] Standard	SOJET (Original)		SOJET (Revised)	
		Student	Supervisor	Student	Supervis
Process Incoming Enrollment Applications					
a. Review forms for correctness/ completeness	0.25	0.50	0.25	0.25	0.25
b. Compare request with catalog entry to determine eligibility/ availability	3.00	-	-	-	-
c. Check for and certify equivalent credits for student	1.50	-	-	-	-
d. Code information for computer input	2.00	5.00	2.00	3.00	1.00
e. Make up and mail welcome letter	1.50	1.50	-	1.50	1.50
Total Minutes	8.25	9.25		7.50	

[a]Task elements and time requirements under IPD procedures based on data developed by Institute for Professional Development.

TABLE 17

COMPARISON OF LABOR REQUIREMENTS AND PRINTING AND MAILING COSTS REQUIRED TO ADMINISTER ENTIRE ACCP ACCORDING TO IPD, ORIGINAL SOJET AND REVISED SOJET PROCEDURES

Cost Categories	Central Management Procedures		
	IPD Standard	SOJET (Original)	SOJET (Revised)
Labor Costs			
Student Services Division			
a. Office of Division Chief	2,788 hrs.	2,788 hrs.	2,788 hrs.
b. TREDS-NRI Section	6,800	6,816	6,834
c. Processing Branch	153,637	356,171	161,371
d. Administrative Branch	12,444	18,300	14,292
Production and Distribution Division	83,631	167,262	167,262
Total Man-hour Requirements	259,300	551,377	352,547
Man-hours Required per Student (N=202,009 Students)	1.284	2.729	1.745
Salary Required to Process One Student At Average of $6.00/Hr.	$ 7.70	$16.33	$10.47
Non-Labor Costs			
Printing: Cost to support one student[a]	$18.12	$20.92	$18.60
Mailing: Cost to support one student[a,b]	7.38	16.48	14.64
Estimated Cost to Process and Support One Student	$33.20	$53.73	$43.68

[a]Assume that IPD and SOJET students are each sent an average of 12 subcourses.

[b]Subcourses sent by book rate; other material sent by First Class mail. Mailing costs based on non-discounted rates.

SOJET procedures are more labor-intensive than those used by IPD in part because a supervisor must be registered along with each student. This doubles the paperwork required to enroll one student. Also, SOJET procedures require that subcourse material be sent to both the student and the course supervisor, a requirement that contributes to the doubling of mailing costs and the labor associated with these activities. An examination of Table 18 will clarify these points.

Table 18 lists the tasks on which IPD and SOJET labor requirements differ by at least 10%. For each listed task, the annual hours required to process 202,009 students were determined. Points to note are:

- For 11 of 16 listed activities, manpower requirements are higher for SOJET procedures.
- Mailing out a SOJET course guide (original procedures) is the most time-consuming requirement of the SOJET program. About 10 minutes per guide are required. Under the revised procedures the course guide would be discontinued.
- Mailing test material separately to supervisors doubles the amount of labor required to distribute subcourse material.
- The requirement to register the supervisor greatly increases the time needed to process source documents, maintain quality control over source documents, and complete work unit logs.

The figures in Table 17 demonstrate that the central management of correspondence courses, even though computer supported, is a highly labor-intensive operation because of the number of times different pieces of paper must be handled. For example, a one-minute increase in the time required to process 200,000 enrollment applications would increase IPD's workload by 3,333 hours. Obviously, doubling the number of forms in a student application packet would increase IPD's annual workload by thousands of hours.

TABLE 18

ESTIMATED ANNUAL MANHOURS REQUIRED FOR SELECTED ACCP ACTIVITIES BASED ON IPD, ORIGINAL SOJET, AND REVISED SOJET PROCEDURES (HOURS)

Organizational Element and Work Activity	Central Management Procedures		
	IPD Standard	SOJET (Original)	SOJET (Revised)
Student Services Division			
a. Office of Division Chief	-	-	-
b. TREDS-NRI Section	-	-	-
c. Processing Branch			
(1) Branch Chief	-	-	-
(2) Team Chief			
(a) Breakdown work for team daily	313	939	626
(b) Decision making/interpreting policy	247	210	210
(c) Maintain records	65	78	76
(3) Sr. Training Technician			
(a) Correct edit listing	173	47	31
(b) Quality control of source documents	4,230	11,421	7,614
(c) Determine waiverability	520	1,040	1,040
(d) Review Form Letter 15	867	3,466	216
(4) Training Technician			
(a) Process source documents	4,506	12,797	8,111
(b) Completion of work unit log	2,050	9,082	6,888
(c) Process supervisor changes	-	3,872	3,872
(5) Enrollment Clerk			
(a) Process Enrollment forms	27,776	31,143	25,251
(b) Return erroneous applications	2,525	7,575	3,367
(c) Mail SOJET Course Guide	-	30,413	-
(d) Complete work unit log	2,050	1,304	1,304
d. Administration Branch			
(1) All personnel			
(a) Opening/processing mail	12,444	18,300	14,292
Production and Distribution Division			
a. All personnnel			
(1) All required activities	83,631	167,262	167,262

The increased cost of the SOJET program can be attributed primarily to the need for subcourse test scoring guides. This is a document not normally employed with correspondence courses. In addition to preparation costs, scoring guides must be printed, stored, retrieved and mailed. Any training program that employs test scoring guides usually will incur costs above those for courses where tests are centrally scored by machine.

V. EVALUATION OF FEATURES OF THE SOJET PROGRAM DELIVERY PROCEDURES

A. ACCEPTANCE OF REQUIREMENT FOR A REGISTERED SUPERVISOR

When a student enrolls in a SOJET course, a supervisor must register along with him as a course supervisor. This course supervisor is expected to help the student identify his training requirements, take responsibility for storing and maintaining security of test material, administer and score subcourse tests, provide immediate test feedback to the student, and assure that test results are forwarded to the Institute for Professional Development.

Survey and interview data relating to the registered supervisor requirement are summarized in Table 19. A majority of students (60%) accepted the concept of having a course supervisor who is involved with on-the-job extension training. Moreover, potential students (89%) and supervisors (98%) expressed a willingness to accept the concept of course supervisor. Registered supervisors never were specifically queried about their willingness to register as a course instructor. They did have an opportunity to comment on this requirement and no complaints were received about it.

One of the potential disadvantages of the SOJET program is that the administration of a test requires the availability of two persons, a student and a course supervisor. In reply to a query about this potential problem, 85% of active Army students reported that their supervisor usually or always was available: 82% of the students in National Guard and Reserve units provided a similar report (Table 20). However, 28% and 22% of active Army and NG/USAR supervisors, respectively, reported that it usually or always was difficult to find a time when both student and supervisor were available for testing or for review of test scores (Table 21, Question 6j).

The SOJET program is based in part on the assumption that training benefits from the program will be increased by involving first-line supervisors in the training. Most supervisor and student respondents favored the active participation of a registered course supervisor. However, as noted already, the requirement to have a registered supervisor: (1) increases administrative costs (p. 38) and may make continued student participation difficult due to personnel (Supervisor) turbulence (p. 33). If so, this rests on the requirement for a supervisor to administer and score tests as opposed to the requirement to register as a course supervisor. The presence of a registered supervisor may have increased the extent to which students participated in the SOJET program, but there are no data to substantiate this.

TABLE 19

SUMMARY OF INTERVIEW AND SURVEY DATA
RELATED TO ACCEPTANCE OF THE ROLE
OF COURSE SUPERVISOR

	SOURCE (ANNEX A)
o 98% of potential supervisors were willing to register as a course supervisor	Table B-10
o 88% of potential supervisors were willing to administer and score pre-and posttests	Table B-9
o 89% of potential students were willing to enroll along with a course supervisor	Table B-11
o 72% of persons requesting information about the program reacted favorably to a description of the program	Table D-3
o 60% of enrolled students expressed a preference for having a course supervisor; another 18% said they "did not care one way or the other"	Table E-1
o 60% of the persons interviewed during field trips preferred supervisor involvement with the SOJET program	Table B-12 Table B-16

TABLE 20

STUDENT REPLIES TO QUESTIONS RELATED TO TESTING PROCEDURES[a]

Question Number and Question	Component	N	Response Options				
			Never	Sometimes	Usually	Always	NA
10. Does your supervisor administer and score your pretests?	AA	17	-	-	-	100%	-
	NG/USAR	60	8%	5%	13%	70%	3%
11. Does your supervisor administer and score your posttests?	AA	17	-	-	-	94%	6%
	NG/USAR	65	5%	3%	7%	82%	2%
12. Is your supervisor readily available to administer and score your tests?	AA	20	-	10%	10%	75%	5%
	NG/USAR	65	5%	12%	37%	45%	2%
13. Does your supervisor provide feedback to you within one or two days after you take a test?	AA	17	-	-	12%	88%	-
	NG/USAR	60	5%	13%	27%	52%	2%
14. Do you get to look at your lesson material when taking a pretest?	AA	16	69%	13%	6%	6%	6%
	NG/USAR	58	53%	21%	12%	9%	5%
15. Do you get to use your lesson material when taking a posttest?	AA	17	65%	12%	12%	-	12%
	NG/USAR	58	57%	14%	17%	9%	3%

[a]Third Survey Data

TABLE 21

SUPERVISOR REPLIES TO QUESTIONS RELATED TO TESTING PROCEDURES[a]

Question Number and Question	Component	N	Response Options			
			Never	Sometimes	Usually	Always
6a. Do you personally administer and score pretest?	AA	17	4%	4%	4%	87%
	NG/USAR	41	2%	6%	14%	78%
6b. Do you personally administer and score all post-tests?	AA	17	-	-	4%	96%
	NG/USAR	37	-	6%	4%	89%
6c. Are the test scoring guides easy to use?	AA	17	-	22%	48%	30%
	NG/USAR	41	6%	10%	45%	39%
6d. Are the test scoring guides accurate?	AA	17	-	22%	43%	35%
	NG/USAR	39	-	10%	56%	33%
6e. Do you study lesson or test material before giving a test?	AA	17	26%	35%	26%	13%
	NG/USAR	41	10%	50%	20%	20%
6f. Do you allow students to take tests as "open book" exams?	AA	13	48%	38%	5%	9%
	NG/USAR	41	55%	18%	18%	8%
6g. Do you provide feedback to students within 1-2 days after tests?	AA	15	-	5%	18%	77%
	NG/USAR	39	2%	4%	23%	71%
6h. Do you have any problems finding a place to store tests?	AA	19	88%	8%	-	4%
	NG/USAR	39	75%	19%	4%	2%
6i. Do you have any problems maintaining test security?	AA	15	82%	18%	-	-
	NG/USAR	45	96%	4%	-	-
6j. Is is difficult to find a time when both you and the student are free to take and to review a test?	AA	15	18%	54%	23%	5%
	NG/USAR	45	20%	59%	14%	8%

[a]Third Survey Data

A SOJET-like program must have some means of sending test material to a responsible person in the field. In the SOJET program this is accomplished by sending the material to a registered supervisor. A decision to continue this requirement or to consider other options must be based on policy.

Although responding favorably to the concept of a registered course supervisor, a number of students and supervisors expressed reservations about some of the specific activities and procedures required of course supervisors. These requirements are reviewed on the following pages.

B. ACCEPTANCE OF ENROLLMENT PROCEDURES

When the SOJET program first was implemented, three enrollment/registration forms, and at least one Student Training Plan had to be completed--a process which, on the average, required 34 minutes of supervisor time (Table 22). A number of survey respondents complained about the time-consuming and complicated nature of the enrollment/registration process (Table 23). Also, IPD personnel reported that many enrollment applications had to be returned because the Student Training Plan or one or more of the forms were filled out incorrectly. In addition, analysis of the data recorded on Student Training Plans led to the conclusion that these plans were not being filled out as intended (see pp.57-61). For these reasons it was concluded that enrollment procedures were inadequate and unacceptable, and in need of immediate revision.

Currently the SOJET program uses a revised set of enrollment procedures and forms. The number of enrollment forms was reduced from three to two and the requirement to fill out and return a Student Training Plan was eliminated. Also, enrollment instructions were rewritten to make them easier to follow. As a result of these actions the number of enrollment applications rejected in recent months has decreased substantially.

C. ACCEPTANCE AND ADHERENCE TO TESTING PROCEDURES

The SOJET program employs a variety of testing features which, as a total package, are quite unique. Data related to the acceptance of and adherence to these features are reviewed on the following pages.

Storage and Security of Tests

In the SOJET program all lesson materials requested by the student are mailed to him immediately following enrollment. This is

TABLE 22

AVERAGE TIME TO CONDUCT COURSE SUPERVISOR ACTIVITIES

(MINUTES)[a]

ACTIVITY	ACTIVE ARMY SUPERVISORS		NG/USAR SUPERVISORS	
	Officers	Enlisted	Officers	Enlisted
Enroll one student	34	48	29	26
Give one test	30	28	39	19
Score one test	17	10	16	13
Review results of one test with student	18	22	19	31
Send results of one test to IPD	13	6	11	9
Total	112	114	114	98

[a]Third Survey Data, Question 2, Supervisor Questionnaire

TABLE 23

SUMMARY OF CRITICAL COMMENTS MADE BY ENROLLED STUDENTS AND REGISTERED SUPERVISORS[a]

Comments	1st Survey (NG/USAR Respondents)		3rd Survey (AA & NG/USAR Respondents)	
	Supervisor (N=32)	Student (N=38)	Supervisor (N=86)	Student (N=85)
Enrollment procedures too complicated and time consuming	6	5	8	-
Scoring/administrative procedures too time consuming	4	-	4	-
Errors in subcourse material, tests, and scoring guides	1	2	11	16
Material poorly written/ material and/or test questions confusing	-	-	4	4
Way needed to identify which material goes with which student	3	1	-	-
Master list needed for material sent to student and supervisor; cannot tell if anything is missing	2	2	-	-
Takes too long to get material after enrolling	-	4	-	-
More time needed to complete study	-	-	-	5
Material not always relevant	-	-	2	4
Supervisor is not needed	-	-	1	3
Need "800" hotline to IPD	-	-	-	3
Miscellaneous	-	-	14	6

[a]Number of persons who made same or similar comment. Replies of active Army and NG/USAR students and supervisors have been combined.

called "one shot" mailing. Similarly, all corresponding test materials are mailed to the registered course supervisor, who is responsible for storing and maintaining security of the test material.

When the SOJET program began there was some concern as to whether supervisors had access to adequate storage facilities. Interviews with actual and potential supervisors and students indicated that all supervisory personnel had access to a secure storage area. During the third survey 81% of course supervisors reported never having storage problems. An additional 14% reported that they sometimes have such problems (Table 24). Reports of storage problems were most apt to come from National Guard or Reserve personnel. This reflects the finding that some National Guard personnel became the course supervisor for as many as 12-15 students.

Eighty-nine percent of the registered supervisors who responded to the third survey reported having no problems maintaining test security. Security problems were more apt to be reported by supervisors in the active Army (18%).

The foregoing findings indicate that the "one-shot" mailing of lesson and test material is an acceptable practice--it causes few if any storage and security problems.

Complaints not related to storage or security were registered about the "one-shot" mailing approach (Table 23). When a person registers as a supervisor for two or more persons, he receives test packets for each student. When the program was first implemented, there was no easy way for the supervisor to match test material with a student. In response to complaints about this problem the procedure was changed. Currently, the address used to mail out test material to the supervisor also lists the name of the student to whom the material applies.

Tests Administered and Scored by Supervisor

The SOJET program course supervisor is responsible for administering and scoring both pretests and posttests. Detailed scoring guides are provided for each test. The first survey, dealing with National Guard and Reserve supervisors, indicated that test administration and scoring procedures were being followed rather closely. The findings of the third survey for enrolled students and registered supervisors are presented in Tables 20 and 21.

Both enrolled students (Table 20, Questions 10 and 11) and registered supervisors (Table 21), Questions 6a and 6b) reported that most course supervisors do personally administer both pre and post-

TABLE 24

SUMMARY OF SUPERVISOR RESPONSES TO QUESTIONS RELATING TO SUBCOURSE TEST STORAGE AND SECURITY[a]

Question	Component	N	Response Options			
			Never	Sometimes	Usually	Always
6a. Do you have any problems finding a place to store tests?	AA	24	88%	8%	-	8%
	NG/USAR	48	75%	19%	4%	2%
6b. Do you have any problems maintaining test security?	AA	22	82%	18%	-	-
	NG/USAR	51	96%	4%	-	-

[a]Third Survey Data

TABLE 25

NUMBER AND PERCENT OF STUDENTS FOR WHOM VARIOUS COMBINATIONS OF PASSING AND FAILING PRETESTS AND POSTTESTS WERE SUBMITTED

Passing or Failing Status of Tests Submitted	Test Form	
	Pretest (N = 273)[a]	Posttest (N = 273)[a]
Passing tests only	105 (39%)	176 (64%)
Mix of passing and failing tests	84 (31%)	14 (4%)
Failing tests only	20 (7%)	--
Did not submit this test form	64 (23%)	83% (31%)

[a]Number of persons for whom either or both a pretest and posttest was submitted.

tests. However, supervisors of National Guard and Reserve units were less apt to be personally involved in test administration (82% for posttests) than were active Army supervisors (94% involvement). The first survey of NG/USAR supervisors revealed that the training NCO of those units sometimes administered the tests; also, on occasion, students were allowed to take the tests at home, although scoring was always done by a supervisor or training NCO. These findings indicate that course supervisors did accept responsbility for the administration and scoring of tests.

Test Scoring Guides

The test scoring guides provided to course supervisors were meant to be usable by non-subject matter experts. Most supervisors (about 80%) did report that these guides usually were easy to use. They pointed out, however, that some guides contained errors (Table 21, Question 6d) and sometimes were difficult to use; 7% of the NG/USAR supervisors felt that the guides were never easy to use. Most of the difficulties with the scoring guides seem attributable to the collation errors which some of them contained. This problem is expected to be removed when the guides are revised and corrected. Generally, the data indicated that the use of test scoring guides is an acceptable way to provide test scoring guidance to non-subject matter experts.

Feedback to Students

SOJET program course supervisors were requested to provide immediate feedback to the student, an action that cannot be accomplished using the traditional delivery sytstem for correspondence courses. Almost all supervisors complied with this request. Over 95% of the supervisors reported that they usually or always provided feedback to students within one or two days. Active Army students confirmed this (Table 20, Question 13). However, almost 18% of the NG/USAR students reported that their supervisor seldom or never provided immediate feedback. This tended to be confirmed by the replies of their supervisors as shown in Table 21, Question 6g. These findings can be accounted for by the difference in availability between active Army and National Guard/Reserve supervisors. In the active Army the supervisor and student may be in daily contact, while in National Guard and Reserve units this contact may be on a monthly basis. Indeed, some NG/USAR students commented that test feedback usually was given them during the next scheduled duty period.

Use of Subcourse Material

It seems reasonable to presume that many tasks taught in the SOJET courses will be performed on the job using appropriate subcourse lesson material as job aids; if this presumption is correct, the ability to pass a subcourse test using SOJET subcourse lesson material probably is an accurate indication that job requirements can be met.

As shown in Table 20, 25% of active Army students and 42% of NG/USAR students reported that they were allowed to take the pretests as an "open book" test, at least on occasion. Approximately the same percentage of students said they took posttests as "open book" tests. As shown in Table 21, an even higher percentage of supervisors reported the practice of "open book" testing (Question 6f).

The foregoing findings may account, in part, for the high percentage of persons who passed pretests or who passed posttests on the first attempt. The SOJET subcourse material is explicit enough so that there is little reason for persons to fail on an "open book" test. Furthermore, it should be noted that "open book" testing is not specifically prohibited in the SOJET program, nor in most other correspondence courses, for that matter. It should be remembered also that many students had been assigned to operation or intelligence positions for many months (Table 7, page 24). If a decision is made that students should not consult lesson material during testing, a specific statement to that effect should be prominently located in each SOJET subcourse test scoring guide.

Test Reporting Requirements

As of late September 1979, 273 of the 634 students enrolled as of 1 September 1979 had submitted tests for one or more subcourses. Table 25 shows the number and percent of students for whom passing and failing pretests and posttests were submitted. The data indicate that the majority of students (77%) who submitted any kind of test submitted a pretest. A further analysis of the data contained in Table 25 revealed that 61% of the students submitted passing tests only; 18% submitted only passing pretests; 23% submitted only passing posttests, and 20% submitted a mix of passing pretests and posttests (Table 26).

During this study it was not possible to estimate the percent of persons who did not submit a failing pretest. At a minimum, 64 students never submitted a pretest; they submitted only posttests, almost all of which were scored as "passing". It seems probable that some if not most of these students failed the pretest on one or more subcourses but never reported these failures. It was concluded, therefore, that the requirement to report failing pretest scores was to some degree unacceptable.

TABLE 26

PERCENT OF STUDENTS FOR WHOM VARIOUS COMBINATIONS OF PASSING AND FAILING PRETESTS AND POSTTESTS WERE SUBMITTED

Form of Test Submitted	Results of Tests Submitted			Total
	All Passing Tests	Mix of Passing and Failing Tests	All Failing Tests	
All Pretests	18%	9%	4%	31%
All Posttests	23%	-	-	23%
Mix of Pre- and Posttests	20%	26%	-	46%
Total	61%	35%	4%	

Both the field trips to CONUS units and the initial survey of NG/USAR students and supervisors produced information suggesting that the test recording procedures were in need of change. The original procedures reportedly were too cumbersome; the requirement to submit failing pretest scores was not being followed in some instances; and IPD procedures for processing SOJET subcourse test results were time consuming. To correct these deficiencies a new set of scoring procedures has been developed and implemented on a test basis. The details of these procedures are described in the SOJET Program Implementation Handbook, Annex B to this report.

In general, the new procedures make use of the optical scan test recording sheet currently employed with other correspondence courses. The requirement to submit pretest scores separately has been dropped. Instead, the SOJET course supervisor now records pre and posttest results on a single optical scan sheet. When the student has passed all subcourse requirements, this scan sheet is forwarded to IPD for further processing.

As a result of these new procedures, more supervisors should be willing to report pretest results, and the time required by IPD personnel to process the test results will be reduced to that required for the typical correspondence course.

D. REDUCTION IN OJT TIME DEMANDS ON SUPERVISOR

Time Requirements of Course Supervisors

The SOJET program delivery system is based on the assumption that time spent by a course supervisor to supervise students will be more than offset by a reduction in the time they otherwise would have spent conducting on-the-job training. The validity of this assumption is difficult to demonstrate because very few, if any, NCOs maintain a record of the time they expend conducting OJT.

The average time spent by supervisors on the various activities required of them as SOJET course supervisors is shown in Table 22. Time required to enroll one student is about 35 minutes. Thereafter, it takes about 75 minutes to administer and score the tests for one subcourse, to review test findings with the student, and to forward the findings to IPD. According to these figures, a student who enrolls in a complete operations sergeant course consisting of 19 subcourses would consume a total of 24 hours of course supervisor time, assuming that the student completed his program of instruction.

Each SOJET subcourse covers a specific task, some of which are more complicated than others to teach. Assuming that these tasks were

learned over a six-month period in the SOJET program, the time required per week by a course supervisor would be approximately one hour. This probably is a lesser amount of time than that typically devoted to OJT. Eighty-one percent of NG/USAR and 62% of active Army supervisors reported that SOJET lesson material usually or always reduced the time required for them to conduct OJT (see discussion of lesson material, and Table 28).

During this study some course supervisors reported that they had or anticipated having difficulty finding the time to carry out their program responsibilities. The effort which a course supervisor must put into the program is fairly obvious, while the benefits to be gained from the program seem less obvious to supervisors. This probably accounts for their occasional reluctance to participate in the program.

Provision of High Quality Self-Study Material

One goal of the SOJET program was to develop high quality, self-instructional material. This research did not attempt to directly evaluate that material, but the various surveys did solicit information and opinions about lesson material quality.

Survey data (third survey) related to the quality and relevance of subcourse material are summarized in Table 27. Most students reported that:

- The lesson material was easy to understand.
- The lesson material adequately prepared one to take a posttest.
- The lesson material usually covered tasks performed on the job.
- The procedures described in the lesson material usually were similar to those used on the job.
- The lesson material usually or always helps one perform better on the job.

Course supervisors provided similar data, as shown in Table 28. In general, supervisors reported that:

- The SOJET lessons were relevant to job requirements.
- Student job proficiency noticeably improved after students studied SOJET lesson material.

TABLE 27

SUMMARY OF STUDENT REPLIES TO QUESTIONS ABOUT

SOJET LESSON MATERIAL[a]

Question Number and Question	Component	N	Response Options				
			Never	Sometimes	Usually	Always	Unk/NA
17. Do you think that SOJET material is easy to understand?	AA	20	-	15%	60%	25%	-
	NG/USAR	64	2%	9%	58%	29%	2%
18. Does the study of lesson material adequately prepare you to take a posttest?	AA	20	-	15%	40%	30%	15%
	NG/USAR	63	-	6%	51%	35%	8%
19. Does the lesson material cover tasks which you perform on the job?	AA	20	5%	20%	40%	30%	5%
	NG/USAR	64	25%	50%	22%	3%	-
20. Are the procedures described in the lesson material similar to those you use on the job?	AA	20	5%	20%	40%	25%	10%
	NG/USAR	64	-	22%	59%	16%	3%
21. Does study of SOJET material help you perform better on the job?	AA	20	-	30%	20%	40%	10%
	NG/USAR	64	-	9%	50%	39%	2%

[a]Third Survey Data

TABLE 28

SUMMARY OF SUPERVISOR REPLIES TO QUESTIONS RELATED

TO SUBCOURSE EFFECTIVENESS AND JOB RELEVANCE[a]

Question	Component	N	Response Options				
			No	Sometimes	Usually	Always (Yes)	Other
12. In your judgment are SOJET lessons relevant to job requirements:	AA	25	-	8%	60%	32%	-
	NG/USAR	57	-	7%	54%	32%	7%
13. In your judgment does the job proficiency of personnel noticeably improve as the result of studying SOJET lesson material?	AA	24	4%	13%	54%	21%	8%
	NG/USAR	48	-	15%	27%	50%	8%
14. Does the use of SOJET lesson material reduce the time required to train personnel OJT?	AA	23	13%	22%	35%	26%	4%
	NG/USAR	49	2%	16%	16%	61%	4%

[a]Third Survey Data

- o SOJET lesson material reduced the time required to conduct on-the-job training.

According to the foregoing replies, both students and supervisors were of the opinion that SOJET lesson material was relevant and of high quality. However, active Army students and supervisors tended to respond less positively than did NG/USAR personnel.

It should be noted that some of the SOJET lesson material did contain errors and some of it was obsolete (Table 23). Persons interviewed in the field and respondence to all three surveys noted that this was the case. A number of students and supervisors reported specific instances of error or obsolescence to IPD, which in turn forwarded this information to the appropriate course developers.

Identification of Job Requirements and Training Needs

A supervisor has the responsibility for identifying job requirements, for identifying those specific requirements that job incumbents cannot meet, and for devising means to correct incumbent deficiencies. As an aid to the carrying out of these responsibilities, the potential SOJET program student and supervisor were provided with a set of four Student Training Plans (STP), a sample of which is shown in Figure 4. A separate STP was provided for each of the four basic SOJET courses.

The STP for a particular course listed the subcourses contained in that course and the lessons or tasks covered by each subcourse. In effect, each STP provided an inventory of the important tasks that are performed by persons in a particular operations or intelligence duty position at the battalion level. The course supervisor was instructed to review all the STPs and to select the STP most relevant to the potential student. The supervisor then reviewed the tasks listed in the STP and indicated in column 1 (see Figure 4) those tasks for which the potential student was responsible. In column 2 the supervisor indicated the degree of skill required to perform each of the tasks checked in column 1. Following this, the supervisor and student reviewed the list together and indicated in column 3 the present skill of the potential student. If the present skill level for any particular task was less than that required for the job, the supervisor checked, in column 4 of the STP, that the student wished to order that subcourse. The STP was returned to IPD along with other enrollment forms; the STP served to verify the subcourses enrolled in by the student.

Table 29 shows the average estimated skill requirements (column 2) and the average estimated current skill (column 3) for 367 students. The data have been subdivided in terms of the skill level of

STUDENT NAME: _____

OPERATIONS SERGEANT/ASSISTANT OPERATIONS SERGEANT - TASKS FOR ALL BRANCHES OF THE COMBAT ARMS _____

Subcourse Number	Subcourse/Lesson Title Duty Position: OPS SGT/ASST OPS SGT - Combat Arms	Col. 1 Tasks Required (enter Y or N)	Col. 2 Skill Required (enter rating number chosen)	Col. 3 Present Skill (enter rating number chosen)	Col. 4 Subcourses desired enter Y or N
OS0001	MAINTAIN PUBLICATIONS				☐
	#1. Use Chargeout Card.	☐	☐	☐	
	#2. Determine Publications for Library.	☐	☐	☐	
	#3. Request Publications and Update Master List.	☐	☐	☐	
	#4. Supervise Posting of Changes to Publications.	☐	☐	☐	
OS0002	SUPERVISE PREPARATION OF CORRESPONDENCE				☐
	#1. Proof Military Letters.	☐	☐	☐	
	#2. Proof Indorsements.	☐	☐	☐	
	#3. Proof Disposition Forms.	☐	☐	☐	
	#4. Proof Non-Military Letters and Memorandums.	☐	☐	☐	
OS0003	SUPERVISE MAINTENANCE OF ARMY FUNCTIONAL FILES				☐
OS0004	MANAGE TRAINING RESOURCES				☐
	#1. Coordinate Training Schedules.	☐	☐	☐	
	#2. Prepare Training Ammo Forecast.	☐	☐	☐	
OS0005	EVALUATE CONDUCT OF TRAINING				☐
	#1. Prepare for Observation of Training.	☐	☐	☐	
	#2. Observe Conduct of Training.	☐	☐	☐	
	#3. Evaluate Training.	☐	☐	☐	
OS0006	PREPARE UNIT READINESS REPORT				☐
OS0007	PLAN AND COORDINATE CEREMONIES				☐
	#1. Determine Support Requirements.	☐	☐	☐	
	#2. Determine Sequence of Events.	☐	☐	☐	
	#3. Prepare Letter of Instruction (LOI).	☐	☐	☐	
OS0008	SUPERVISE PREPARATION OF BRIEFING CHARTS				☐
OS0009	PREPARE LOADING CARDS FOR GROUND/AIR MOVEMENT				☐
OS0010	PREPARE FOR GROUND MOVEMENT OPERATIONS				☐
	#1. Organize the Steps to be Performed.	☐	☐	☐	
	#2. Develop Vehicle Load and Road Movement Plans.	☐	☐	☐	
	#3. Prepare Road Movement Strip Map.	☐	☐	☐	
	#4. Assemble Road Movement Operations Order (OPORD).	☐	☐	☐	
	#5. Assemble Information for FRAG Order.	☐	☐	☐	
OS0011	PREPARE FOR AIR DEPLOYMENT				☐
	#1. Determine Aviation Requirements to Support Movement.	☐	☐	☐	
	#2. Prepare Loading Plans for an Air Movement.	☐	☐	☐	
	#3. Assemble Air Movement Operations Order (OPORD).	☐	☐	☐	
	#4. Prepare Briefing on Movement.	☐	☐	☐	

Figure 4. Illustrative Page from Student Training Plan for Operations Sergeant/Assistant Operations Sergeant Course

TABLE 29

AVERAGE RANKS ASSIGNED TO SKILL REQUIRED AND PRESENT SKILL LEVELS (COLUMNS 2 and 3) OF STUDENT TRAINING PLAN

Student MOS Skill Level	Operations Sergeant Course		Intelligence Sergeant Course		Assistant/ Specialist Courses		All Courses Combined	
	Col 2[a]	Col 3[b]	Col 2	Col 3	Col 2	Col 3	Col 2	Col 3
50	3.65	2.19	3.53	2.02	3.67	2.25	3.59	2.16
40	3.48	1.85	3.57	2.12	3.53	1.53	3.50	1.88
30	3.08	1.65	3.58	1.98	3.58	1.68	3.32	1.77
20	3.61	1.79	4.00	1.00	3.43	1.43	3.51	1.55
10	3.28	1.13	-	-	-	-	3.28	1.13
Average for all levels	3.53	1.19	3.50	2.06	3.48	1.53	3.52	1.97

[a]Col 2 rankings = skill required of job holder
[b]Col 3 rankings = current skill of job incumbent

the student and in terms of the course selected. Those persons processed under the Operations Sergeant course include those who enrolled only for the basic course plus those who enrolled for the course plus additional subcourses. The same is true for STPs processed under the Intelligence Sergeant and the Assistant/Specialist courses. Because of a low N, the two Assistant/Specialist courses were combined. The points to note with respect to Table 29 are:

a. For all courses estimated skill requirements (column 2) were considerably higher than current skill level (Column 3).

b. Persons at higher grade levels tended to report a need for higher skill requirements and also tended to report a higher level of current skill.

The foregoing findings are what would be expected. Persons at higher grade levels usually have higher skills and their job usually requires them to possess a higher skill level, in part because they have to be able to teach a variety of tasks to subordinates.

The discriminate validity of the STP data can be judged in part in terms of the pattern of responses provided by the students and supervisors. If large numbers of persons assign the same rank to all tasks or return the STPs without ranking the tasks, that is an indication that the respondents are not carefully discriminating between task importance, skill required to peform the task, and the present skill level of the potential student. Table 30 shown the distribution of ranks provided in column 2 of the STP (estimated skill required). In completing this column the range of ranks used may vary from 1 rank (assign all tasks a rank of 4, for example) to 4 ranks. As shown in Table 30, 41% of the respondents used only one rank when estimating skill requirements. Further analysis showed that most of these persons assigned a rank of 4 to all tasks. An additional 31% of the respondents used two adjacent ranks when completing column 2 (i.e., 1 and 2, 2 and 3, etc.). Most of these respondents used a rank of 4 with the occasional use of rank 3.

Students and supervisors used a wider range of ranks when reporting the present skill level of students (Table 30, column 3). Only 24% of the respondents assigned the same rank to all tasks while 44% used a range of either 3 or 4 ranks.

The foregoing findings suggest that a substantial minority of supervisors and students do not complete student training plans carefully. In particular, it appears that many raters were not differentially rating the tasks. Moreover, approximately one-half of the supervisors either left column 2 of the STP blank or used only a

TABLE 30

RANGE OF RANKS USED TO COMPLETE SKILL REQUIRED AND PRESENT SKILL LEVELS (COLUMNS 2 AND 3) OF STUDENT TRAINING PLAN (N = 367)

Student MOS Skill	Range of Ranks Used to Complete Col 2[a]					Range of Ranks Used to Complete Col 3[a]				
	Blank	1	2	3	4	Blank	1	2	3	4
50	14	71	56	32	10	12	30	46	55	50
40	5	37	23	12	1	4	19	21	21	13
30	7	22	18	8	2	6	20	13	13	5
20	4	17	16	6	1	4	15	9	10	6
10	-	3	1	1	-	-	2	2	1	-
Percent	8%	41%	31%	16%	4%	7%	24%	25%	27%	17%

[a]Number of persons using this range of ranks

TABLE 31

STUDENT AND SUPERVISOR PREFERENCE FOR MAILING APPROACH

Mailing Options	Component	Student Preference	Supervisor Preference
One-shot mailing	AA	75%	78%
	NG/USAR	76%	91%
Send lessons 1 to 3 at a time	AA	25%	19%
	NG/USAR	22%	9%
Other	AA	-	3%
	NG/USAR	2%	-

single rank when estimating skill requirements. Approximately one-third of the respondents either left column 3 of the STP blank (7%) or used only one rank when completing that column. On the survey questionnaires, some students and supervisors did report that the STPs had been useful; others, however, said that they were not useful.

. A Student Training Plan has many potential uses. It can provide both the supervisor and the student with an overview of the tasks performed by operations and intelligence personnel. It can provide a means for systematically identifying duty position requirements, estimating the skill level required for performing tasks acceptably, and assessing the capability of current job incumbents. The disadvantage of an STP is that it is time consuming to complete, and thus the possibility exists that persons will complete it in a perfunctory and invalid fashion. In view of the uncertain usefulness of the Student Training Plan, and the need to reduce the time required to enroll in the program, it was decided to discontinue the requirement to submit a STP as part of the enrollment application. Instead, the STPs now are provided strictly as an aid to identifying training requirements. They are included in the enrollment package, with recommendations on how to use them, but supervisors are instructed not to return them to IPD.

In the final version of the SOJET program it is suggested that the use of STPs be discontinued. By mid-1980 all combat arms school catalogs should contain a listing of SOJET subcourses. Training requirements can be determined by a review of these listings. Also, eliminating STPs will reduce the printing and mailing costs associated with the SOJET program.

Training Records Centrally Maintained

For most OJT programs, training records, if they are kept at all, are maintained at the unit level. The SOJET program maintains records at a central location, utilizing specially designed procedures. The goal of this central record keeping capability is to relieve supervisors of the chore of maintaining OJT records. Also, central records provide a means for students to receive training credits and promotion consideration.

Field acceptance of central record keeping procedures was not directly assessed in this study. However, no direct complaints were received about the centralized process. As noted already, complaints related to test scoring and recording procedures were received. The nature of these complaints and the measures devised to provide solutions to them were discussed under test administrative and scoring procedures.

The standard procedures developed by IPD to handle student/supervisor queries from the field are designed to provide student representatives at IPD with easy access to student training records. These procedures were used to answer questions from SOJET students/supervisors and, according to IPD personnel, worked satisfactorily with the SOJET program.

E. LOCAL SEQUENCING OF TRAINING

The "One-Shot" Mailing Approach

In the SOJET program all subcourses requested by a student are sent to him immediately following enrollment. Similarly, all corresponding test material is sent to the course supervisor. This procedure is called "one-shot" mailing. The one-shot mailing approach is designed to allow students to study subcourses in an order befitting their needs and interests and those of their unit.

During the field visits and the first two study surveys, considerable support was expressed for the one-shot mailing approach. Findings related to this procedure and obtained during the third survey are contained in Table 31. Both students and course supervisors expresssed a strong preference for this approach over that used with traditional correspondence courses. A somewhat stronger preference was reported by National Guard and Reserve personnel.

During the third survey students and supervisors were asked to describe how they decided the order in which subcourses were studied. Replies to this question are shown in Table 32. Thirty-one percent and 58% of active Army and NG/USAR students, respectively, gave replies which suggested that they did take advantage of the scheduling opportunities provided by the one-shot mailing approach. These replies included: studied on basis of unit need, order determined by supervisor, order based on student interests, and first studied material least knowledgeable in. The remaining students said either that they studied subcourses in numerical sequence or in a chance order, or that they studied on the basis of factors not relevant to student or unit needs/interests. As seen in Table 32, supervisors gave a similar set of replies.

The extent to which students locally sequenced their training should be reflected in the order in which subcourse tests are submitted to IPD. This order can be determined by an analysis of student training records. The order is sometimes distorted because two or more tests may be submitted concurrently, with no indication as to which one was taken first.

TABLE 32

MAJOR FACTORS USED TO DETERMINE ORDER
IN WHICH SUBCOURSES WERE STUDIED

Factors	Component	Students (N=85)	Supervisors (N=86)
1. Order of numbered sequence of subcourses	AA	2[a]	3
	NG/USAR	16	16
2. On basis of unit need and/or training schedule	AA	4	11
	NG/USAR	11	10
3. On basis of student needs or interests	AA	-	3
	NG/USAR	14	16
4. Determined by supervisor	AA	1	-
	NG/USAR	6	-
5. Studied material in which least knowledgeable	AA	-	2
	NG/USAR	4	5
6. Studied easiest material Or shortest lessons first	AA	5	2
	NG/USAR	3	2
7. Order selected at random	AA	2	-
	NG/USAR	7	4
8. Studied in order received in mail	AA	1	-
	NG/USAR	3	-
9. Miscellaneous	AA	-	-
	NG/USAR	-	4
10. No response	AA	5	8
	NG/USAR	1	-

[a]Number of persons providing same or similar comments

An analysis of the order in which the results of SOJET subcourse tests appeared on training records is shown in Table 33. The students represented in this Table are those who enrolled for at least a complete course.

The medians shown in Table 33 were obtained as follows. First, the subcourse number of the first test submitted was determined. Secondly, the ordinal position of each of these subcourses on an appropriate student training plan was determined. For example, a student enrolled in an Intelligence Course might have submitted first a test on a subcourse OS0015. This is the 4th listed subcourse on the STP for intelligence sergeant courses. As a further illustration, examination of five students enrolled in one of the OPS SGT courses might shown that they first submitted tests on subcourses OS0001, OS0003, OS0001, OS0005 and OS0013. Respectively, these are the 1st, 3rd, 1st, 5th and 13th listed subcourses on the OPS SGT STP. In this illustration, the median listed order of first-submitted tests is 3. Using similar procedures a median can be established for tests submitted 2nd, 3rd, and so on.

The data in Table 33 indicate that there is a mild relationship between the order in which a test is submitted and the order in which it is listed on a student training plan. This relationship is fairly strong for OPS SGT courses but is fairly weak for INTEL SGT courses. In general the data support the survey findings--at least 33% of the students tended to study the subcourses in an order which reflected their training needs and/or the needs of their unit.

Secondary Advantages and Cost. The one-shot mailing approach provides a student with a complete set of course material that he or others in his unit may use in a variety of ways. During the third survey, both students and supervisors were asked to indicate the various ways in which SOJET material was utilized in their unit. The replies are summarized in Table 34.

Fifty percent or more of all respondents reported that the lesson material was used for reference purposes and as a aid for preparing for SQTs. Most supervisors reported that the material also was used to train persons not enrolled in the program. It seems important to note that active Army supervisors reported more extensive utilization of the material than did National Guard and Reserve supervisors; probably this is because many National Guard and Reserve students kept their material at home. Seventy-eight percent of active Army supervisors said the material was used for reference purposes, 69% reported its use for training others, and 56% reported its use as an aid for preparing for SQTs. Also, 35% of active Army supervisors indicated that the material was used to inform supervisors about how to perform

TABLE 33
ORDER IN WHICH SOJET SUBCOURSE TESTS WERE SUBMITTED
COMPARED WITH ORDER IN WHICH SUBCOURSES
WERE LISTED ON COURSE CATALOG

Courses	Component	Order of Subcourse Test Submission									
		1	2	3	4	5	6	7	8	9	10
Y01-Y04	AA	2.7[a]	4.0	4.5	5.5	6.1	7.8	8.7	9.2	10.0	12.5
	NG/USAR	2.1	4.2	5.2	6.5	6.7	7.0	7.2	8.6	9.4	10.2
Y05-Y08	AA	5.0	4.3	5.0	6.0	8.0	10.0	8.5	9.5	8.8	11.3
	NG/USAR	2.8	9.0	6.0	4.8	5.6	6.7	7.2	9.0	10.1	11.0
Y09-Y12	AA	a	a	a	-	-	-	-	-	-	-
	NG/USAR	2.8	3.2	2.5	3.5	b	b	b	b	b	b
Y13-Y16	AA	3.5	5.5	b	b	b	b	b	b	-	-
	NG/USAR	1.8	4.5	b	b	b	b	-	-	-	-

[a]Median order of listing on course catalog

[b]Too few tests to provide stable median

TABLE 34

UTILIZATION OF SOJET MATERIAL AT THE UNIT LEVEL[a]

Ways SOJET Lesson Material Has Been Useful	Component	Student Replies	Supervisor Replies
As reference material	AA	82%	80%
	NG/USAR	83%	61%
As training material/job aids for persons not enrolled in program	AA	29%	72%
	NG/USAR	64%	52%
To inform supervisors how certain tasks should be performed	AA	29%	40%
	NG/USAR	42%	35%
As an aid in preparing for [illegible]	AA	59%	60%
	NG/USAR	54%	50%
Other	AA	6%	8%
	NG/USAR	12%	6%

[a]Third S[illegible] cudent Ns = 17 (AA) and 59 (NG/USAR). Supervis[illegible] (AA) and 54 (NG/USAR).

certain tasks. It appears that the SOJET material has been used in a variety of beneficial ways by persons other than the enrolled students. In part this is a side benefit of the one-shot mailing approach.

In terms of costs the one-shot mailing approach is slightly more costly than that used with traditional correspondence courses. In the traditional course, three lessons are first sent to the student; following submission of at least one test, three additional subcourses are mailed out. The average student in the traditional course receives three mailings each containing three subcourses. In the SOJET program all subcourses are mailed to the student in individual packages, and the average student receives 12 subcourses. A similar number of packages containing subcourse test material must be sent to SOJET course supervisors. Because of these differences mailing costs are higher for the SOJET program than for traditional programs. However, in terms of mailing costs it matters little whether the subcourse test packets are mailed individually or in packages of three, or whether they are sent to supervisors or included with student lesson material. Mailing costs are related primarily to the weight of the material being mailed.

The benefits received from the one-shot mailing approach are difficult to quantify at this time. At least 33% of the students appear to take advantage of the one-shot mailing approach, since they do sequence their course of study in accordance with their needs and interests. Also, the majority of students and supervisors reported that they utilize SOJET material in a variety of ways. In particular, active Army personnel reported that the material is extensively used as reference material, as an aid to training others in the unit, and as an aid to preparing for SQTs. For certain duty positions and tasks, it would seem important to provide material that can be used for informal study and reference purposes even though it never is a part of a correspondence course. The one-shot mailing approach does serve as a means for providing such material at the unit level.

VI. FEEDBACK TO COURSE DEVELOPERS AND PROGRAM MANAGERS

The successful management of correspondence programs requires the collection of a variety of data that can be used by program managers to administer the program and by course developers to make appropriate revisions to lesson material, course prerequisites, and so on. In this section some of the reports prepared by IPD will be reviewed and the need for additional reports designed especially for course developers will be discussed and examples provided.

A. RELEVANCE OF TRAINING TO LOCAL REQUIREMENTS

Currently there are no formal procedures for collecting data bearing on the relevance of various correspondence courses to local job requirements. In the SOJET program the Student Training Plan was designed so that the supervisor would provide information about the relevance of the various tasks covered in one or more of the SOJET courses. As already noted, complaints were received about the time required to complete the Student Training Plan, and an analysis of the data provided by the STP suggested that much of the data might be invalid. For these reasons the formal requirement to submit a Student Training Plan was deleted from SOJET procedures.

Replies obtained during the third survey indicated that most students and supervisors felt that the SOJET material was job relevant (Table 28). As a means for continuing to collect such information, it is suggested that at the end of each SOJET subcourse lesson packet a form be provided that students and course supervisors can use to report on various aspects of lesson or test material. Such a form is employed with most correspondence courses. The typical form is designed by the proponent school, usually is quite general in nature, and is used by the student only when he has a critical comment to make about the lesson or test material.

It is suggested that such a form would be more useful if it were slightly structured. Students would be asked to return the form when they had a critical comment to make about one or more of the topics listed on the form. An example of such a form is shown in Figure 5. Item 1e on that form asked the student to indicate whether the material covered in a particular subcourse was relevant to his duty requirements. If the student returned the form for any reason, he would answer this and the other questions listed under Item 1 of the form.

In the SOJET program there needs to be a form that course supervisors can use to comment about course and test material. Figure 6

Student Subcourse Critique Form

Subcourse Number _____

Instructions: Return this form if you have critical comments to make.
a. Record number of subcourse you are commenting about.
b. In Item 1 below check all comments that apply to subcourse.
c. In Item 2 below explain nature of comment & provide solution if you have one.
d. Use additional sheets of paper for comments if needed.
e. Fold form and staple twice and mail.

Item 1: Check (✓) all comments that apply to listed subcourse
a. ____ Lesson material incorrect or obsolete.
b. ____ Lesson material difficult to understand.
c. ____ Lesson material and test questions do not agree.
d. ____ Answer(s) to some test questions are incorrect.
e. ____ Lesson material not relevant to job duties.
f. ____ Other: _____
g. ____ Other: _____

Item 2: Provide more detailed description of comment and suggest a solution if you have one.

Figure 5. Illustration of Student Subcourse Critique Form

Supervisor Subcourse Critique Form

Subcourse No. _____

Instructions: Return this form if you have critical comments to make.
a. Record number of subcourse you are commenting about.
b. In Item 1 below check all comments that apply to subcourse.
c. In Item 2 below explain nature of comment & provide solution if you have one.
d. Use additional sheets of paper for comments if needed.
e. Fold form and staple twice and mail.

Item 1: Check (✓) all comments that apply to listed subcourse
a. ____ Test scoring guide is difficult to use.
b. ____ Answers provided in test scoring guide are incorrect.
c. ____ Lesson material incorrect/obsolete.
d. ____ Lesson material difficult to understand.
e. ____ Lesson material not relevant to job duties.
f. ____ Other: _____
g. ____ Other: _____

Item 2: Provide a more detailed description of comments and suggest a solution if you have one.

Figure 6. Illustration of Supervisor Subcourse Critique Form

contains an illustration of a Supervisor's Subcourse Critique Form for this purpose. It is suggested that this form be located at the end of each subcourse pretest scoring guide. As illustrated, the form would contain a short list of questions to be answered by a check, followed by a more detailed explanation of the complaint being registered.

An indirect way of determining the job relevance of subcourses is to determine the rate at which the subcourses are requested. IPD produces a monthly report showing the demand rate for all subcourses for the past 12 months. By scanning this report it becomes obvious which subcourses are in high and in low demand. Presumably a high demand for a subcourse would be an index of a perceived relevance at least of the subcourse title. Table 36 shows the number of SOJET subcourses which were issued from May 1978 through April 1979. Subcourses OS0001 and OS0027 are examples of high and low demand subcourses, respectively.

Table 35 also shows the percent of students who submitted a test, pre or posttest, passing or failing, for each SOJET subcourse. As an illustration, during the period from May 1978 through April 1979, 340 sets of subcourse OS0001 lesson/test material were issued. During the period from May 1978 through June 1979 some kind of test on OS0001 material had been received from 27% of the stuidents to whom the material had been issued. This information can be used by course developers to identify those subcourses for which tests are seldom submitted. They then can examine such subcourses to determine if their tests are too difficult or if their content is obsolete or no longer job relevant.

Figure 7 contains an illustration of the proposed report for providing subcourse issue information and subcourse test submission rates to course developers. This form shows for each subcourse the number of subcourses issued per month, the number of passing subcourse tests received per month, and the total number of subcourses issued and tests received during the past 12 months. This report is somewhat similar to the subcourse utilization report now prepared by IPD. However, additional programming would be required to develop the test submission data.

B. EXTENT TO WHICH TRAINING REACHES TARGET AUDIENCE

Currently IPD has few procedures for determining the degree to which training reaches the appropriate audience. One report shows the type of student--defined as Active Army, National Guard, Navy, Civilian, and so on--who enrolls in various programs. The absence of more detailed student profile information is in part due to the lack of space for capturing additional data on DA Form 145, the form used to enroll in a correspondence course.

TABLE 35

NUMBER OF SUBCOURSES ISSUED THROUGH APRIL 1979
AND PERCENT OF TESTS SUBMITTED THROUGH JUNE 1979

Subcourse No.	Issued	Tests[a]	Subcourse No.	Issued	Tests	Subcourse No.	Issued	Tests
OS0001	340	27%	OS0023	115	15%	010865	45	7%
2	365	23%	24	110	6%	66	44	14%
3	367	22%	25	113	11%	67	33	9%
4	280	27%	26	123	8%	68	31	10%
5	284	19%	27	57	7%	69	38	5%
6	258	16%	28	60	5%	70	47	19%
7	272	17%	29	84	12%	0N0711		
8	282	18%	30	88	6%	12		
9	275	16%	0A6001	62	47%	13	Recent Issue	
10	286	12%	02	117	19%	15		
11	255	11%	03	59	37%	OR1490	69	9%
12	282	20%	04	112	17%	91	46	13%
13	282	15%	05	112	22%	92	46	20%
14	278	18%	06	111	18%	93	45	16%
15	130	23%	07	53	47%	94	49	16%
16	131	16%	08	50	30%	95	78	12%
17	126	19%	09	53	27%	96	83	12%
18	128	18%	010860	28	0%	97	83	7%
19	150	14%	61	37	0%	98	87	11%
20	141	24%	62	41	0%			
21	146	20%	63	41	0%			
22	146	18%	64	52	4%			

[a]Percent of students submitting any kind of test, pre or posttest, passing or failing

COURSE YO1 BRANCH: Armor

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEARLY TOTAL TO DATE
OR1491	No. Issued	10	8	8	5	2	2	2	2	-	-	1	6	46
	No. Passing Tests	-	-	2	4	-	-	-	-	-	-	-	-	6
OR1492	No. Issued	10	8	8	5	2	2	2	2	-	-	1	6	46
	No. Passing Tests	-	-	-	3	5	1	-	-	-	-	-	-	9
OR1493	No. Issued													
	No. Passing Tests													
OR1494	No. Issued													
	No. Passing Tests													

Figure 7. Illustration of Subcourse Issue and Test Submission Report

In addition to the DA 145 Form used to enroll students, the SOJET program used a special form to register course supervisors. The original version of this later form collected a variety of profile information about both students and supervisors. Some of the supervisor profile information, obtained from the supervisor registration form, is shown in Tables 36 and 37; it is of interest but is not crucial to the successful revision of course material. The currently used version of the supervisor registration form collects very little profile information.

The amount of student profile information that can be collected on future SOJET student enrollment forms will be determined primarily by the extent to which additional data can be recorded on a revised version of DA Form 145. In turn, this will depend on the deletion of certain data from the present form (Figure 8). Analysis of section 4 of DA Form 145 has shown that six additional columns of data could be captured on that form. In addition, data pertinent to "RYE Date-Day" and "EYE Date-Day" could be deleted because this information is not needed. This would free space on the present form for collecting other types of data, specifically student MOS and skill level, number of months in current duty position, and total number of months in related duty positions. For more information about revisions to this form see Annex B.

To make use of this new information, programs should be developed so that reports could be prepared to display student profile information in response to a variety of questions. These questions should include: (a) what are the characteristics of students enrolled in a particular course; (b) what are the characteristics of persons who pass or fail particular subcourse tests; (c) what type of person enrolls but never submits a test; and so on. In response to these and similar questions, a report similar to that shown in Figure 9 would be produced.

C. COST EFFECTIVENESS OF INDIVIDUAL SUBCOURSES

Currently IPD produces a number of monthly reports that, in one way or another, can be used to judge the cost effectiveness of subcourses. One report shows sub-course demand rate over a 12-month period. It is used primarily to determine reorder points for subcourses. However, it also can be used to determine those subcourses for which there is little demand--information that would be of use to course developers.

As noted previously, a type of report that would be useful to course developers is one showing the ratio of tests submitted to subcourses ordered. Table 35 (page 73) contains this type of information

TABLE 36

RANK OF SOJET PROGRAM COURSE SUPERVISORS

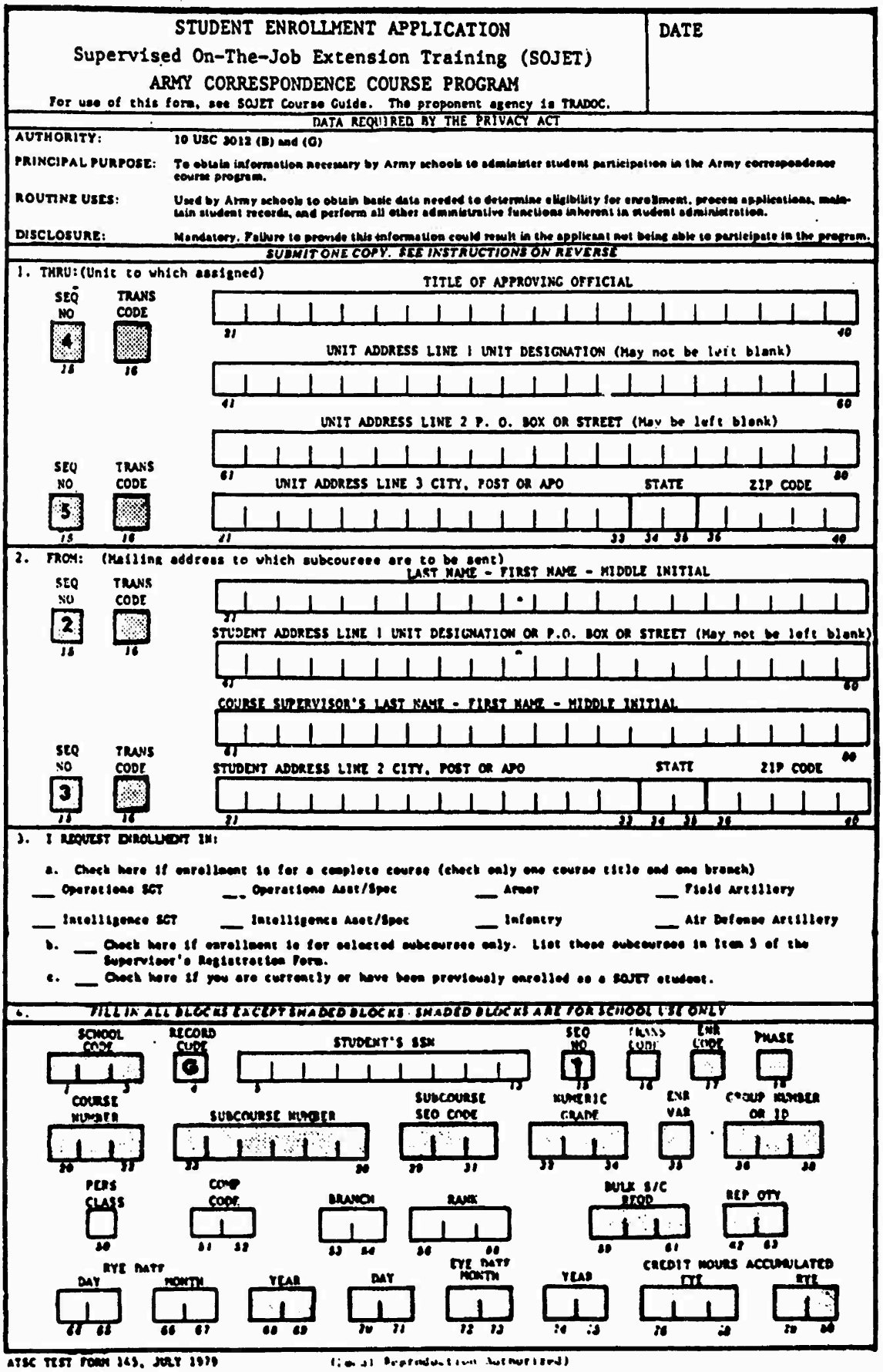
Activity	Component	Supervisor Rank												
		SSG	SEC	MSG	SGM	CSM	2LT	1LT	CPT	MAJ	LTC	COL	Unk	TOTAL
OPS SGT Courses (Y01-Y04)	AA	3	4	13	9	8	3	4	22	23	1	1	1	92
	NG/USAR	-	4	8	11	13	5	17	60	81	-	5	5	209
INTEL SGT Courses (Y05-Y08)	AA	1	2	4	2	1	4	7	8	6	-	-	-	35
	NG/USAR	-	-	9	8	-	-	2	54	24	-	-	2	99
OPS ASST/ SPEC Courses (Y09-Y12)	AA	-	7	13	1	-	2	-	4	4	-	-	-	31
	NG/USAR	-	3	13	3	-	-	2	16	13	1	-	3	54
INTEL ASST/SPEC Courses (Y13-Y16)	AA	-	1	2	2	-	2	4	1	1	-	-	-	13
	NG/USAR	-	-	11	3	-	1	-	9	5	-	-	-	29
Selected Sub-Courses (Y01-Y08)	AA	-	1	6	2	-	-	3	7	1	1	-	-	21
	NG/USAR	-	-	6	1	-	-	1	12	14	2	-	-	36
Selected Sub-Courses (Y09-Y12)	AA	-	2	2	-	-	1	-	1	-	-	-	-	6
	NG/USAR	-	-	-	-	-	-	6	2	1	-	-	-	9
Total	AA	4	17	40	16	9	12	18	43	35	2	1	1	198
	NG/USAR	1	7	47	26	13	6	28	153	138	3	5	10	436

TABLE 37

DISTRIBUTION OF ACTIVE ARMY SUPERVISORS BY DUTY POSITION AND COURSE REGISTERED IN[a]

Supervisor Duty Position	Courses				Totals
	Operations Sergeant	Intelligence Sergeant	Operations Assistant Specialist	Intelligence Assistant/ Specialist	
Unit Commander	1	-	-	-	--
OPS Officer/Asst OPS Officer	24	1	-	-	25
OPS SGT/ ASST Ops Sgt	17	1	5	-	23
INTEL Officer/ Asst INTEL Officer	2	16	-	4	22
INTEL Sgt/Asst INTEL SGT	-	6	-	3	9
Other	22	7	-	1	30

[a]If a supervisor registered in both a senior and junior course, he was assigned to the senior source.



STUDENT ENROLLMENT APPLICATION
Supervised On-The-Job Extension Training (SOJET)
ARMY CORRESPONDENCE COURSE PROGRAM
For use of this form, see SOJET Course Guide. The proponent agency is TRADOC.

DATE

DATA REQUIRED BY THE PRIVACY ACT

AUTHORITY: 10 USC 3012 (B) and (G)

PRINCIPAL PURPOSE: To obtain information necessary by Army schools to administer student participation in the Army correspondence course program.

ROUTINE USES: Used by Army schools to obtain basic data needed to determine eligibility for enrollment, process applications, maintain student records, and perform all other administrative functions inherent in student administration.

DISCLOSURE: Mandatory. Failure to provide this information could result in the applicant not being able to participate in the program.

SUBMIT ONE COPY. SEE INSTRUCTIONS ON REVERSE

1. THRU: (Unit to which assigned)

SEQ NO 4 (15) TRANS CODE (16)

TITLE OF APPROVING OFFICIAL (21–40)

UNIT ADDRESS LINE 1 UNIT DESIGNATION (May not be left blank) (41–60)

UNIT ADDRESS LINE 2 P. O. BOX OR STREET (May be left blank) (61–80)

SEQ NO 5 (15) TRANS CODE (16)

UNIT ADDRESS LINE 3 CITY, POST OR APO (21–33) STATE (34–35) ZIP CODE (36–40)

2. FROM: (Mailing address to which subcourses are to be sent)

SEQ NO 2 (15) TRANS CODE (16)

LAST NAME - FIRST NAME - MIDDLE INITIAL (21–40)

STUDENT ADDRESS LINE 1 UNIT DESIGNATION OR P.O. BOX OR STREET (May not be left blank) (41–60)

COURSE SUPERVISOR'S LAST NAME - FIRST NAME - MIDDLE INITIAL (61–80)

SEQ NO 3 (15) TRANS CODE (16)

STUDENT ADDRESS LINE 2 CITY, POST OR APO (21–33) STATE (34–35) ZIP CODE (36–40)

3. I REQUEST ENROLLMENT IN:

a. Check here if enrollment is for a complete course (check only one course title and one branch)

___ Operations SCT ___ Operations Asst/Spec ___ Armor ___ Field Artillery

___ Intelligence SCT ___ Intelligence Asst/Spec ___ Infantry ___ Air Defense Artillery

b. ___ Check here if enrollment is for selected subcourses only. List these subcourses in Item 5 of the Supervisor's Registration Form.

c. ___ Check here if you are currently or have been previously enrolled as a SOJET student.

4. FILL IN ALL BLOCKS EXCEPT SHADED BLOCKS. SHADED BLOCKS ARE FOR SCHOOL USE ONLY

SCHOOL CODE (1–3) RECORD CODE G (4) STUDENT'S SSN (5–13) SEQ NO 1 (15) TRANS CODE (16) ENR CODE (17) PHASE (18)

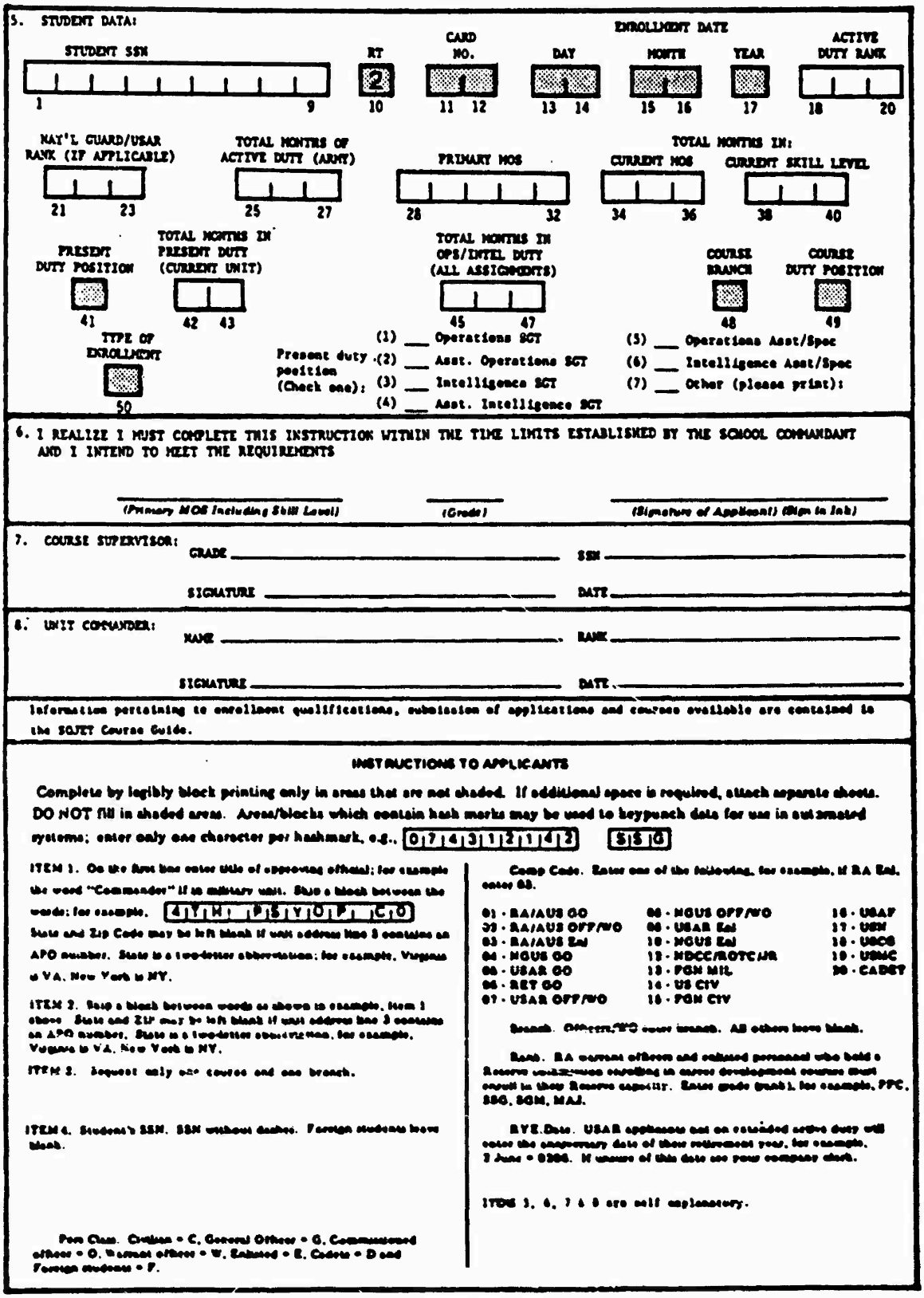
COURSE NUMBER (20–23) SUBCOURSE NUMBER (23–26) SUBCOURSE SEQ CODE (29–31) NUMERIC GRADE (33–34) ENR VAR (35) GROUP NUMBER OR ID (36–38)

PERS CLASS (50) COMP CODE (51–52) BRANCH (53–54) RANK (56–58) BULK S/C RECD (59–61) REP QTY (62–63)

EVE DATE DAY (64–65) MONTH (66–67) YEAR (68–69) DAY (70–71) EVE DATE MONTH (72–73) YEAR (74–75) CREDIT HOURS ACCUMULATED EXE (76–78) RTE (79–80)

ATSC TEST FORM 145, JULY 1979 (Local Reproduction Authorized)

Figure 8. SOJET Program Student Enrollment Application Form



5. STUDENT DATA:

STUDENT SSN (1–9) | RT (10) | CARD NO. (11–12) | ENROLLMENT DATE: DAY (13–14), MONTH (15–16), YEAR (17) | ACTIVE DUTY RANK (18–20)

NAT'L GUARD/USAR RANK (IF APPLICABLE) (21–23) | TOTAL MONTHS OF ACTIVE DUTY (ARMY) (25–27) | PRIMARY MOS (28–32) | TOTAL MONTHS IN: CURRENT MOS (34–36), CURRENT SKILL LEVEL (38–40)

PRESENT DUTY POSITION (41) | TOTAL MONTHS IN PRESENT DUTY (CURRENT UNIT) (42–43) | TOTAL MONTHS IN OPS/INTEL DUTY (ALL ASSIGNMENTS) (45–47) | COURSE BRANCH (48) | COURSE DUTY POSITION (49)

TYPE OF ENROLLMENT (50)

Present duty position (Check one):
(1) ___ Operations SGT
(2) ___ Asst. Operations SGT
(3) ___ Intelligence SGT
(4) ___ Asst. Intelligence SGT
(5) ___ Operations Asst/Spec
(6) ___ Intelligence Asst/Spec
(7) ___ Other (please print):

6. I REALIZE I MUST COMPLETE THIS INSTRUCTION WITHIN THE TIME LIMITS ESTABLISHED BY THE SCHOOL COMMANDANT AND I INTEND TO MEET THE REQUIREMENTS

(Primary MOS Including Skill Level) _____ (Grade) _____ (Signature of Applicant) (Sign in Ink) _____

7. COURSE SUPERVISOR:
GRADE _____ SSN _____
SIGNATURE _____ DATE _____

8. UNIT COMMANDER:
NAME _____ RANK _____
SIGNATURE _____ DATE _____

Information pertaining to enrollment qualifications, submission of applications and courses available are contained in the SOJET Course Guide.

INSTRUCTIONS TO APPLICANTS

Complete by legibly block printing only in areas that are not shaded. If additional space is required, attach separate sheets. DO NOT fill in shaded areas. Areas/blocks which contain hash marks may be used to keypunch data for use in automated systems; enter only one character per hashmark, e.g., 0 7 4 3 1 2 1 4 2 S S G

ITEM 1. On the first line enter title of approving official; for example the word "Commander" if an military unit. Skip a block between the words; for example, 4 T H P S T O P C O

State and Zip Code may be left blank if unit address line 3 contains an APO number. State is a two-letter abbreviation; for example, Virginia is VA, New York is NY.

ITEM 2. Skip a block between words as shown in example. Item 1 above. State and ZIP may be left blank if unit address line 3 contains an APO number. State is a two-letter abbreviation, for example, Virginia is VA, New York is NY.

ITEM 3. Request only one course and one branch.

ITEM 4. Student's SSN. SSN without dashes. Foreign students leave blank.

Pers Class. Civilian = C, General Officer = G, Commissioned officer = O, Warrant officer = W, Enlisted = E, Cadets = D and Foreign students = F.

Comp Code. Enter one of the following, for example, if RA Enl, enter 03.

01 - RA/AUS GO	06 - NGUS OFF/WO	16 - USAF
02 - RA/AUS OFF/WO	08 - USAR Enl	17 - USN
03 - RA/AUS Enl	10 - NGUS Enl	18 - USCG
04 - NGUS GO	12 - NDCC/ROTC/JR	19 - USMC
05 - USAR GO	13 - PGN MIL	20 - CADET
06 - RET GO	14 - US CIV	
07 - USAR OFF/WO	15 - PGN CIV	

Branch. [illegible] enter branch. All others leave blank.

Rank. RA warrant officers and enlisted personnel who hold a Reserve commission enrolling in career development courses must report in their Reserve capacity. Enter grade (rank), for example, PFC, SSG, SGM, MAJ.

RYE Date. USAR applicants not on extended active duty will enter the anniversary date of their retirement year, for example, 2 June = 0206. If unsure of this date see your company clerk.

ITEMS 5, 6, 7 & 8 are self explanatory.

Figure 8a. SOJET Program Student Enrollment Application(2nd side)

Subcourse No. OS0010 Edition A Lesson or Exam Version 01 Question Requisition No. 02 Type of Test 01

SSN	Pers[1] Class	Comp.[1,3] Code	Branch[1,4]	Rank[1]	Primary MOS	Number of Months at [2] Current Skill	Current Duty
XXXXXX900	E	10	-	MSG	95B50	28	40
XXXXXX010	E	9	-	SFC	13Y00	8	8
XXXXXX030	E	9	-	1SG	11B50	-	28
XXXXXX113	E	9	-	MSG	19Z50	29	31
XXXXXX713	E	10	-	SFC	11B40	34	35
XXXXXX374	E	10	-	SFC	11B40	72	27
XXXXXX825	E		-	MSG	11B50	30	30

[1]E = Enlisted personnel. Codes and data taken from DA Form 145.

[2]Information taken from proposed revision to DA Form 145.

[3]Code indicates type of student (e.g., 9=USAR Enl, 10=NGUS Enl) from DA Form 145.

[4]Recorded only for officers.

Figure 9. Proposed Profile Report of Persons Failing a Subcourse Pretest Requirement

for SOJET subcourses. For example, for subcourse 0A6007, 53 subcourses were issued during the previous 12 months and the rate of test return was 47%. For the SOJET program this is a very high rate of test return. On the other hand, subcourse 0S0030 was issued to 88 persons and the rate of test return was only 6%.

Of course, the reasons for high demand for, or low rate of test return for, any particular subcourse would have to be determined by an analysis of written and interview comments provided by the students. In any event, the data in Table 35 do suggest that certain subcourses are cost effective while other are not. It is proposed that the actual report containing the foregoing information be formatted as shown in Figure 7 (page 74). The course developer would have to determine the percent of test returns, but this should be simple to accomplish.

D. SUBCOURSE QUALITY CONTROL

Two types of feedback information are of special interest to course developers. One type identifies deficiencies in lesson and test material, and the other analyzes test results. The typical correspondence course uses a student feedback form to obtain information about lesson and test material deficiencies. This information is forwarded to course developers by IPD personnel.

As already noted (Table 20), most complaints about the SOJET program concerned the mismatch between lesson and test material. These complaints seemed due to editing and collation deficiencies, and they should be corrected by appropriate School personnel prior to reprinting of the material. It is suggested that the revised subcourse material contain a student subcourse critique form as shown in Figure 5, and that the scoring guide for each subcourse pretest contain a supervisor subcourse critique form as shown in Figure 6.

IPD employs an item analysis report to present information about passing and failing rates for subcourse test items. Because of differences in test recording and reporting procedures, that report could not be prepared for SOJET courses. However, as described earlier, the SOJET test recording procedures have been modified. Now the standard test recording form used for other correspondence courses can be utilized to report test results for SOJET subcourses. Hence it will be possible, in the future, to produce item analysis reports for SOJET courses. Figure 10 shows how such a report will look. In the SOJET program, test scoring is on a GO/NO GO basis. Therefore, the item analysis report will show the number of students who failed test requirements on the pretest, the first posttest, or the second posttest. Additional information about the revised test recording proce-

Subcourse No.	Edition	Lesson or Exam and Versions	Question or Rqmt No.	Correct Response	A	B	C	D	E	Omit	Total	Percent Correct
OS0001	01		01	A or B	0	0	0	21[4]	20[3]	0	50[2]	100
			02		0	0	0	0	0	50	50	0
			03		0	0	0	0	0	50	50	0
			04		0	0	0	0	0	50	50	0
			05		0	0	0	0	0	50	50	0
			06		0	0	0	0	0	50	50	0
			07		0	0	0	0	0	50	50	0
			08		0	0	0	0	0	50	50	0
			09		0	0	0	0	0	50	50	0
			10		0	0	0	0	0	50	50	0
			11		35[5]	0	0	0	0	15	50	70[6]
			12		25	0	0	0	0	25	50	50
			13		24	0	0	0	0	26	50	48
			14		47	0	0	0	0	3	50	94
			15		0	0	0	0	0	0	50	0
			16		0	0	0	0	0	50	50	0
			17		0	0	0	0	0	50	50	0
			18		0	0	0	0	0	50	50	0
			19		0	0	0	0	0	50	50	0
			20		0	0	0	0	0	50	50	0
			21		0	26[7]	0	0	0	24	50	100[8]
			22		0	19	7[9]	0	0	24	50	73
			23		0	26	0	0	0	24	50	100
			24		0	25	1	0	0	24	50	96
			25		0	0	0	0	0	50	50	0

Footnotes

[1]Format based on TREDS-NRI Item Analysis Report

[2]Indicates that all 50 students eventually passed all subcourse requirements

[3]No. of persons passing all requirements on pretest

[4]No. of persons passing all requirements on first posttest

[5]No. of persons passing requirement on pretest

[6]Percent of persons passing requirement on pretest

[7]No. of persons who passed requirement on first posttest

[8]Percent of persons who passed requirement on first posttest

[9]No. of persons who passed requirement on second posttest

Figure 10. Illustration of Item (Requirements) Analysis Report For A 4-Requirement SOJET Subcourse Test

dures is contained in the SOJET Program Implementation Handbook, Annex B.

E. AMOUNT OF PERSONNEL TURBULENCE

The original version of the SOJET program supervisor's guide contained a form to be used to notify IPD when either the supervisor or the student was transferred, or for some reason was no longer able to continue in the course work or to continue in the role of a supervisor. The information obtained on that form could have been used to develop data bearing on personnel turbulence. However, the data never were used in this manner. It is doubtful whether large numbers of students were even aware of the existence of this form, and many supervisors probably forgot about it.

It is suggested that a revised version of this form, as shown in Figure 11, be used to collect information about the status of supervisors and students. In addition to alerting IPD to the need to help a student obtain a new supervisor, the form can be used by a student to request withdrawal from further course work, to notify IPD of a change in address, to notify IPD about changes in supervisor status and to notify IPD of other changes as described on the form.

To increase the probability that this form will be used, it is suggested that it be bound in each subcourse lesson packet immediately in front of the student subcourse critique form. Also, it is suggested that it be bound in each subcourse pretest scoring guide immediately in front of the supervisor subcourse critique form.

It is suggested that IPD maintain a file of returned critique forms by course number and forward them on a quarterly basis to whichever agency has overall responsibility for the SOJET program. That agency, if it wishes, can use data on the form to determine personnel turbulence rates for students and supervisors.

On a monthly basis IPD prepares a report describing the number of students currently enrolled in the Army correspondence course program, the number of enrollments during the prior month, the number of withdrawals, and so on. For the SOJET program it is recommended that a revised version of this report be maintained on a monthly basis. The suggested format for the report is shown in Figure 12. This report would show for the preceding 12 months the number of students enrolled by month, the number of subcourse completions per month, the number of inactive students, the number of terminations per month, and the number of persons who requested withdrawal from the program per month. This information should be of use both to program managers and to course developers, since it does provide a overview of enrollment and completion trends, and an overall picture of the cost of the program.

NOTIFICATION OF CHANGE OF STATUS OR MAILING ADDRESS

Please return this form to Institute for Professional Development whenever one of the conditions listed below occurs.

1. SUPERVISOR STATUS (Check all that apply)

   1.____Supervisor will no longer be able to perform supervisory duties.
      a.____Student needs new supervisor.
      b.____New supervisor has been located. Supervisor Registration form ____ is, ____ is not attached.
   2.____Supervisor's mailing address has changed but he still will function as supervisor. New address is indicated below.

2. STUDENT STATUS (Check all that apply)

   1.____Student requests to withdraw from further course work. Reason is indicated below.
   2.____Student is changing unit but wishes to continue course work. New unit address is indicated below.
   3.____Student's mailing address has changed but student remains in same assignment. New address indicated below.
   4.____Other change. Describe below

_____

_____

_____

_____

3. Effective date of change_____
   Month Day Year

4. Student's Name_____SSN_____

5. Supervisor's Name_____SSN_____

Test Form 9 (Revised) Oct 79

FIGURE 11. SUGGESTED FORM FOR OBTAINING INFORMATION ABOUT STUDENT AND SUPERVISOR STATUS AND MAILING ADDRESS CHANGES

Course: Y01

TRAINING STATUS REPORT

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
No. Enrolled													
No. Subcourses Completed													
No. Program Completions													
No. Inactive[1] Students													
No. Terminations[2]													
No. Withdrawals													

[1]No. of persons who have not submitted a test since enrollment or in past 90 days

[2]No. of official terminations for any reason, usually for failure to complete course requirements

[3]No. of withdrawals for any reason, usually because of student PCS

Figure 12. Illustrative Training Enrollment and Status Report

VII. APPLICATION OF SOJET PROCEDURES TO CORRESPONDENCE COURSES

Throughout this research, features of the SOJET delivery system were evaluated in terms of field acceptance, administrative feasibility and costs. Modifications to the program were made, as necessary to debug the program(Annex B). Additional modifications have been proposed for future implementation. A point now has been reached when others must decide whether the SOJET program is to continue and, if so, in what form. The observations that follow are offered so that they may be of assistance to those who must decide about the future of the SOJET program.

A. TYPE OF COURSE TO WHICH THE SOJET PROCEDURES APPLY

The SOJET program was intended to provide training support to supervisors conducting duty position OJT. Therefore, SOJET procedures are most suited to courses that have the following characteristics:

a. The instructional material is task-oriented.

b. The instructional material is duty position-oriented.

c. The lesson material covers tasks performed by specific job encumbents.

d. The subcourses can be studied in any order.

e. The assessment of student performance can best be accomplished by the use of performance tests.

f. Student performance can be assessed using specially prepared test scoring guides.

There seem to be no advantages to applying SOJET procedures to courses that teach knowledges as opposed to skills. Traditional correspondence course procedures probably are most cost effective for presenting such courses. On the other hand, there are many job positions that require mastery of a variety of clerical or administrative skills. For such positions it may be advantageous to develop SOJET-like courses, especially if special equipment or facilities are not required in support of the courses.

B. COST OF SOJET PROGRAM DELIVERY SYSTEM

It has been estimated that the revised SOJET program delivery system is approximately 32% more costly than those procedures used to administer traditional correspondence courses (Table 17). As noted already, most of the increased cost can be attributed to the need to print, store, retrieve and mail subcourse test scoring guides. Any delivery system that employs such guides will incur similar costs. When the cost of the delivery system for the SOJET program and for traditional correspondence courses are equated for printing and mailing costs ($43.68 vs. $40.91) there is only a seven percent cost difference between the two approaches. This difference is almost entirely due to the added labor required to store and retrieve separately packaged lesson and test material (SOJET program).

The benefits which might be expected to offset the added SOJET program costs could not be precisely identified, but they seem to include.

1) The "one-shot" mailing approach results in the distribution of lesson material that can be used as reference material by persons not enrolled or registered in the program (Table 34).

2) Students are able to study subcourse material in an order that meet their training needs and those of their unit (Table 32).

3) A reduction in the time required to conduct on-the-job training, as reported by course supervisors (Table 28).

C. IMPACT OF PERSONNEL TURBULENCE

Within active Army units personnel turbulence is fairly high, and this can have a negative impact on student progress in most correspondence courses. The impact is apt to be especially severe for duty position courses which require involvement of the duty position supervisor. In addition to being task-oriented and duty position-oriented, SOJET lesson material was packaged into 16 courses, the four most popular of which contained 16 to 19 subcourses (Table 1). It is highly likely that at least 50% of active Army students enrolled in either of these four course would be reassigned before they had the opportunity to complete their study program (Table 14, page 34). Once reassigned, they would have little incentive for continuing their study unless their new job still was within an intelligence (S2) or operations (S3) section.

Personnel turbulence probably contributed to the high "no start" rate for active Army students. However, those students who submitted one or more tests, especially active Army students, completed a high

percent of their enrolled-for program of study (Table 11). This last finding suggests the SOJET-like courses may be appropriate for high turbulence duty positions. The task-oriented, self-contained nature of SOJET subcourses allows a student to benefit from study of portions of a course even though he may never have an opportunity to complete an entire course.

SOJET program procedures mandate that each student have a registered course supervisor. What indirect evidence there is suggests that the loss of a course supervisor does not greatly affect student progress. The SOJET system was designed so that students could obtain a new supervisor easily. Forms were provided for accomplishing this, and during this study 20 formal requests were made to change course supervisors. In addition to these formal requests, a student could find a person to act for his original course supervisor without reporting this to IPD. Conversations with active Army students and supervisors suggested that this did occur on occasion.

VIII. SUMMARY AND CONCLUSIONS

A. COMPLETION OF SOJET SYSTEM DESIGN

During this study the assigned objectives were accomplished. Deficiencies in the original SOJET delivery system were identified and corrective procedures were developed. Some of these procedures have been implemented. In addition, the design of the SOJET program's delivery system was completed. This included: (a) the development of central management procedures which could be implemented without using special data files and management procedures; and (b) the development of procedures for preparing a variety of feedback reports for use by course developers. The description of the revised SOJET program delivery system (Annex B) can, with minimum programming assistance, be implemented using management and data processing procedures soon to be adopted by IPD.

B. EVALUATION OF SOJET DELIVERY SYSTEM

Acceptance of Role of Course Supervisor

In the process of refining and completing the design of the SOJET program delivery system, the management system objectives incorporated into the program and the approaches taken to achieve these objectives were evaluated.

It was found that both students and supervisors were willing to have course supervisors participate in extension training. More specifically, course supervisors were willing to register by name; help students enroll and plan their program of study; assume responsibility for test security; and assume responsibility for administrating and scoring tests, reviewing test results with students, and reporting the results to IPD. However, supervisors expressed concern about the time required to accomplish these actions, and tended to complain about the complexity of the original SOJET enrollment and test score reporting procedures. On the basis of these findings, revised and simplified procedures for enrollment and for test reporting were developed and implemented.

The requirement to have a registered course supervisor increases program administrative costs. On the other hand, course supervisors help students identify training requirements, provide a source of aid to students and provide feedback to students on test results. Also, they may, on occasion, motivate students to continue in their study program. The beneficial effects of these and other supervisor activi-

ties could not be identified during this research. Future versions of the SOJET program can continue to require a course supervisor. As an alternative, test material can be sent to a student who then passes it on to a person who agrees to safeguard the material and to administer and score tests (the Supervised On-the-Job Training--SOJT--approach). Which option eventually is selected is a matter for the Army to decide.

Impact on OJT Time Requirements

It was anticipated that the SOJET program would provide training support to the supervisor and that this support would lessen the time required of the supervisor to conduct on-the-job training. Survey data from course supervisors indicated that this was the case. Most course supervisors did report that the lesson material was of good quality and was job relevant, and that requirements for OJT were reduced as the result of participating in the SOJET program. However, certain features of the program did not lead to an expected reduction in the demands on supervisor time. In particular, the Student Training Plan, which was intended to help supervisors and students identify training requirements, was completed in a cursory manner by many supervisors. Because of this, and in the interest of reducing the time needed to enroll in the program, the requirement to complete and return a Student Training Plan as part of the enrollment application was discontinued. STPs still are provided in the enrollment packet because a minority of applicants apparently find them quite useful. It is suggested, however, that STPs no longer be distributed once the list of SOJET subcourses has been published in all combat arms school catalogs.

Impact of "One-Shot" Mailing Approach

The "one-shot" mailing approach used with the SOJET program provides students and supervisors with a means for sequencing training to fit local requirements. Survey data and test submission sequence data both showed that about one-third of the students planned their sequence of subcourse study on the basis of their own training need or unit requirements. The remaining students studied subcourses in the order in which they were numbered, or in accordance with other considerations irrelevant to unit needs. The "one-shot" mailing approach also provided units with a complete set of task-oriented lesson material. Many students and supervisors reported that their lesson material was used by others as reference aids or for preparing for Skill Qualification Tests. Because of mailing costs the "one-shot" mailing approach is somewhat more expensive than that followed with other correspondence courses. However, its continued use is suggested.

Adherence to Testing Procedures

Test Scoring Guides. One objective of the SOJET program was to provide students immediate feedback about test results. To make this possible, test scoring guides usable by non-subject matter experts were developed. Based on survey responses it appeared that most supervisors had little difficulty using these guides. However, a number of supervisors noted that the scoring guides contained printing and collation errors. This sometimes made it difficult to match the guide material with test questions. All these problems should be corrected before the next printing of SOJET course test and scoring guide material.

Student Feedback. The course supervisors were requested to score the tests and review test results with students as soon as possible following test administration. Most students and supervisors reported that this requirement was followed, especially within active Army units. This is more difficult to accomplish without time lags in National Guard or Reserve units because such units meet only periodically.

Test Reporting Requirements. Most features of the SOJET program dealing with the collection and reporting of feedback data for course developers were designed during the conduct of this study. Therefore, the usefulness of these data were not evaluated. One feature that was assessed was the requirement to report failing as well as passing pre- and posttest scores to IPD. Analysis of training records suggested that supervisors were reluctant to report failing scores, especially pretest failures. In view of this finding, and the reported need to simplify the test reporting process, the requirement to report pretest scores as soon as the pretests were taken was discontinued. Now, revised SOJET procedures for recording and reporting test scores require that both pre- and posttest results be recorded after the student has successfully passed all subcourse test requirements. Also, test results now are reported on the standard test reporting form used with other correspondence courses instead of on a special form designed for the SOJET program. These revised requirements and procedures are much less time consuming for both course supervisors and IPD personnel.

C. STUDENT PROGRESS AND PERSONNEL TURBULENCE

Analysis of student training records revealed that 70% and 51% of AA and NG/USAR students, respectively, had never submitted a single subcourse test (Table 8). Overall, the course completion rate for all students who have been enrolled for at least four months (classes 1 through 6) was approximately 11 percent (calculated from Table 8

data). On the other hand, analysis of student progress in terms of the number of subcourses completed (Table 10) revealed that of those students who submitted one or more tests, active Army students had completed 12 subcourses (60% of their training program) by the end of six months following enrollment. The rate of progress tended to be considerably less for NG/USAR students.

Data on personnel turbulence (Table 14) suggested that active Army personnel can anticipate reassignment after six months. For many students their new duties will not be related to operations or intelligence, and therefore they probably will discontinue their SOJET program.

The foregoing data suggest that personnel turbulence had a negative impact on student progress, especially if student progress is defined in terms of course completion percentages. When student progress is defined in terms of subcourse completion percentages it appears that personnel turbulence had less of a negative impact. Probably this was because the task-oriented, self-contained nature of each SOJET subcourse made it possible to benefit from the study of one or a few subcourses even though an entire course was not completed.

D. COST OF SOJET PROGRAM

A cost comparison of SOJET and traditional procedures for the delivery and central management of correspondence courses and/or extension training indicated that SOJET procedures (revised) were 32% more costly (Table 17). It was determined that a substantial portion of the increased cost of the SOJET program could be attributed to the need for performance tests and test scoring guides, material required by any program that depends on field personnel to administer and score performance tests. When these costs are equalized for SOJET and for traditional correspondence programs it was found that SOJET procedures were only 7% more costly than those employed to delivery traditional correspondence programs (page 88). It was concluded that the extra costs associated with the SOJET procedures need not be a deterrent to applying them to selected courses, especially those that are designed to be task- and duty position-oriented.

E. CONTINUANCE OF SOJET PROGRAM

Any decision to discontinue the SOJET program must take into account two important factors. First, there is a need for instructional material for battalion S2 and S3 NCO duty positions. These positions were selected as the vehicle for the SOJET program in order to fill an instructional void. The need for instructional material

for these duty positions was substantiated during interviews with active Army personnel. Secondly, the extra cost of using SOJET procedures (revised) to manage the 16 SOJET program courses was calculated as $6,288 ($10.48x600) for an annual enrollment of 600 students (see Table 17). Based on these two findings, it was concluded that the SOJET courses should continue to be offered by the ACCP and should continue to be administered using SOJET procedures for at least through calendar year 1980. This would provide time to integrate SOJET procedures (final) with those under adoption as part of IPD's IMIS system. Also, it would provide time to collect additional enrollment and training data (test submission data) which could be used to evaluate the long-term acceptance and effectiveness of the program. If this last suggestion is adopted, it is proposed that, for comparative purposes, similar types of enrollment and student progress data be collected for two or three correspondence courses which use more traditional delivery procedures. Also, data should be collected on courses administered using IPD's Supervised On-the-Job Training procedures.

APPENDIX A

TABLE A-1

DISTRIBUTION OF ENROLLMENTS IN TERMS OF CURRENT DUTY POSITION[a]
(Senior Sergeant Courses)

Course	Component	Current Duty Position					
		OPS SGT/ ASST OPS SGT	INTEL SGT/ ASST INTEL SGT	OPS ASST/ SPEC	INTEL ASST/ SPEC	Non OPS/ INTEL POSITIONS	Total
OPS SGT							
AR (Y01)[c]	AA	21	1	-	-	6	28
	NG/USAR	49	4	2	-	23	78
INF (Y02)	AA	18	1	-	-	5	24
	NG/USAR	59	3	1	-	13	76
FA (Y03)	AA	11	-	-	-	22	33
	NG/USAR	36	4	-	-	10	50
ADA (Y04)	AA	4	-	-	-	3	7
	NG/USAR	4	-	1	-	-	5
INTEL SGT							
AR (Y05)	AA	1	9	-	1	2	13
	NG/USAR	1	25	5	-	2	33
INF (Y06)	AA	-	5	-	-	4	9
	NG/USAR	2	35	-	1	3	41
FA (Y04)	AA	-	8	-	-	3	11
	NG/USAR	1	21	1	-	1	24
ADA (Y08)	AA	-	2	-	-	-	2
	NG/USAR	-	1	-	-	-	1
Selected Sub-Courses[b] (Y01-Y08)	AA	12	7	-	-	2	21
	NG/USAR	19	11	-	2	4	36
Total	AA	67	33	0	1	47	148
	NG/USAR	171	104	10	3	56	344

[a]Enrollment as of 1 September 1979

[b]Persons who enrolled in less than a full course

[c]Ar = Armor; INF = Infantry; FA = Field Artillery; ADA = Air Defense Artillery

TABLE A-1 (Cont'd)

DISTRIBUTION OF ENROLLMENTS IN TERMS OF CURRENT DUTY POSITION[a]
(Junior Sergeant/Specialist Courses)

Course	Component	Current Duty Position					
		OPS SGT/ ASST OPS SGT	INTEL SGT/ ASST INTEL SGT	OPS ASST/ SPEC	INTEL ASST/ SPEC	Non OPS/ INTEL POSITIONS	Total
OPS SGT							
AR (Y09)[c]	AA	-	-	7	3	3	13
	NG/USAR	1	-	13	8	7	29
INF (Y10)	AA	-	-	8	-	-	8
	NG/USAR	1	-	14	-	-	15
FA (Y11)	AA	1	-	3	-		4
	NG/USAR	-	-	3	-	2	5
ADA (Y12)	AA	-	1	5	-	-	6
	NG/USAR	-	-	5	-	-	5
INTEL SGT							
AR (Y13)	AA	-	-	1	7	5	13
	NG/USAR	-	2	3	14	-	19
INF (Y14)	AA	-	-	-	-	-	-
	NG/USAR	-	-	-	3	1	4
FA (Y15)	AA	-	-	-	-	-	-
	NG/USAR	-	1	-	1	1	3
ADA (Y16)	AA	-	-	-	-	-	-
	NG/USAR	-	1	-	1	1	3
Selected Sub-Courses[b] (Y01-Y08)	AA	-	1	2	1	2	6
	NG/USAR	1	-	1	7	-	9
Total	AA	1	2	26	11	10	50
	NG/USAR	3	4	39	34	12	92

[a]Enrollment as of 1 September 1979

[b]Persons who enrolled in less than a full course

[c]Ar = Armor; INF = Infantry; FA = Field Artillery; ADA = Air Defense Artillery

TABLE A-2

DISTRIBUTION OF ENROLLMENTS IN TERMS OF CURRENT SKILL LEVEL[a]
(Senior Sergeant Courses)

Course	Component	Current Skill Level 1	2	3	4	5	Unknown	Total
OPS SGT								
AR (Y01)	AA	2	2	5	15	3	1	28
	NG/USAR	3	2	15	32	21	5	78
INF (Y02)	AA	-	7	4	12	1	-	24
	NG/USAR	-	5	12	21	36	2	76
FA (Y03)	AA	-	1	9	19	3	1	33
	NG/USAR	-	-	6	15	29	-	50
ADA (Y04)	AA	1	1	1	4	-	-	7
	NG/USAR	-	-	1	2	2	-	5
INTEL SGT								
AR (Y05)	AA	1	-	7	2	-	3	13
	NG/USAR	-	-	9	12	10	2	33
INF (Y06)	AA	-	1	5	1	2	-	9
	NG/USAR	-	3	11	13	14	-	41
FA (Y07)	AA	-	2	3	6	-	-	11
	NG/USAR	-	-	3	7	14	-	24
ADA (Y08)	AA	-	1	-	-	-	1	2
	NG/USAR	-	-	-	-	1	-	1
Selected Sub-Courses[b] (Y01-Y08)	AA	1	5	4	3	5	3	21
	NG/USAR	1	1	2	11	20	1	36
Total	AA	5	20	38	62	14	9	148
	NG/USAR	4	11	59	113	147	10	344

[a]Persons who enrolled in less than a full course

TABLE A-2 (Cont'd)

DISTRIBUTION OF ENROLLMENTS IN TERMS OF CURRENT SKILL LEVEL
(Junior Sergeant/Specialist Courses)

Course	Component	Current Skill Level 1	2	3	4	5	Unknown	Total
OPS SGT								
AR (Y09)	AA	9	3	1	-	-	-	13
	NG/USAR	12	7	4	-	1	5	29
INF (Y10)	AA	7	1	-	-	-	-	8
	NG/USAR	8	1	5	1	-	-	15
FA (Y11)	AA	3	1	-	-	-	-	4
	NG/USAR	3	1	1	-	-	-	5
ADA (Y12)	AA	6	-	-	-	-	-	6
	NG/USAR	-	3	1	1	-	-	5
INTEL SGT								
AR (Y13)	AA	10	1	2	-	-	-	13
	NG/USAR	3	8	7	1	-	-	19
INF (Y14)	AA	-	-	-	-	-	-	-
	NG/USAR	1	2	1	-	-	-	4
FA (Y15)	AA	-	-	-	-	-	-	-
	NG/USAR	1	2	-	-	-	-	3
ADA (Y16)	AA	-	-	-	-	-	-	-
	NG/USAR	1	2	-	-	-	-	3
Selected Sub-Courses[b] (Y09-Y16)	AA	5	1	-	-	-	-	6
	NG/USAR	2	4	1	2	-	-	9
Total	AA	40	7	3	-	-	-	50
	NG/USAR	31	30	20	5	1	5	92

TABLE A-3

DISTRIBUTION OF ENROLLMENTS IN TERMS OF CURRENT MOS[a]
(Senior Sergeant Courses)

Course	Component	Combat MOS				Non-Combat MOS					
		AR	INF	FA	ADA	ENG	INTEL	ORD	OTHER	UNK	Total
OPS SGT AR (Y01)	AA	8	10	6	2	1	-	-	-	1	28
	NG/USAR	45	6	6	-	4	4	4	2	5	78
INF (Y02)	AA	1	21	-	-	1	-	-	1	-	24
	NG/USAR	1	56	-	-	3	3	5	8	-	76
FA (Y03)	AA	-	-	30	1	1	-	-	-	1	33
	NG/USAR	-	9	36		-	-	-	5	-	50
ADA (Y04)	AA	-	-	-	7	-	-	-	-	-	7
	NG/USAR	-	-	-	5	-	-	-	-	-	5
INTEL SGT AR (Y05)	AA	3	3	2	2	2	1	-	-	-	13
	NG/USAR	18	3	2	-	-	8	-	1	-	33
INF (Y06)	AA	-	5	1	1	2	-	-	-	-	9
	NG/USAR	20	19	-	-	-	1	1	-	-	41
FA (Y07)	AA	-	7	1	1	2	-	-	-	-	11
	NG USAR	-	-	20	-	-	3	1	-	-	24
ADA (Y08)	AA	-	-	-	1	-	1	-	-	-	2
	NG/USAR	-	-	-	1	-	-	-	-	-	1
Selected Sub-Courses[a] (Y01-Y08)	AA	-	12	2	6	-	-	-	1	-	21
	NG/USAR	1	4	19	2	1	1	2	6		36
Total (Y01-Y08)	AA	12	58	42	21	9	2	-	2		148
	NG/USAR	85	97	83	8	8	20	15	22	6	344

[a]Persons who enrolled in less than a full course

[b]Eng = Engineering; Intel = Intelligence; Ord = Ordnance

TABLE A-3 (Cont'd)

DISTRIBUTION OF ENROLLMENTS IN TERMS OF CURRENT MOS
(Junior Sergeant/Specialist Courses)

Course	Component	Combat MOS				Non-Combat MOS					Total
		AR	INF	FA	ADA	ENG	INTEL	ORD	OTHER	UNK	
OPS SGT AR (Y09)	AA	-	2	-	5	-	3	2	1	-	13
	NG/USAR	11	6	3	1	1	2	-	1	4	29
INF (Y10)	AA	-	8	-	-	-	-	-	-	-	8
	NG/USAR	-	14	-	-	-	-	1	-	-	15
FA (Y11)	AA	-	-	2	1	-	-	-	1	-	4
	NG/USAR	-	-	3	-	-	-	1	1	-	5
ADA (Y12)	AA	-	-	-	4	-	1	-	1	-	6
	NG/USAR	3	-	-	2	-	-	-	-	-	5
INTEL ASST AR (Y13)	AA	-	-	2	4	-	6	-	-	1	13
	NG/USAR	2	2	3	-	-	11	-	1	-	19
INF (Y14)	AA	-	-	-	-	-	-	-	-	-	0
	NG/USAR	-	1	-	-	-	3	-	-	-	4
FA (Y15)	AA	-	-	-	-	-	-	-	-	-	0
	NG USAR	-	-	1	-	-	1	-	1	-	3
ADA (Y16)	AA	-	-	-	-	-	-	-	-	-	0
	NG/USAR	-	1	-	1	-	1	-	-	-	3
Selected Sub-Courses (Y09-Y16)	AA	-	1	1	2	-	1	-	1	-	6
	NG/USAR	5	3	-	-	-	-	-	1	-	9
Total (Y09-Y16)	AA	0	11	5	16	-	11	2	4	1	50
	NG/USAR	21	27	10	4	1	18	2	5	-	92

TABLE A-4

DISTRIBUTION OF ENROLLMENTS IN TERMS OF MONTHS IN CURRENT DUTY POSITION, AND MONTHS IN ALL OPERATIONS OR INTELLIGENCE DUTY ASSIGNMENTS[a]

Course	Duty Time	Component	N	Duty Time in Months 1-6	7-12	13-18	19-24	25-36	37-48	49+	Unknown
OPS SGT	Mos. in Current Position	AA	92	35[a]	29	17	10	4	-	-	5
		NG/USAR	209	20	22	13	10	14	5	8	8
	Mos. in all OPS/ INTEL Positions	AA	92	22	18	17	8	11	4	15	5
		NG/USAR	209	11	16	9	9	13	11	24	7
INTEL SGT	Mos. in Current Position	AA	35	28	40	9	3	9	-	3	8
		NG/USAR	99	40	21	6	8	9	6	8	-
	Mos. in all OPS/ INTEL Positions	AA	35	11	34	6	3	14	-	23	9
		NG/USAR	99	28	11	7	7	8	7	26	6
OPS ASST/ SPEC.	Mos. in Current Position	AA	31	48	16	19	13	-	-	-	4
		NG/USAR	54	39	28	9	7	6	2	-	9
	Mos. in all OPS/ INTEL Positions	AA	31	35	13	23	10	10	-	1	7
		NG/USAR	54	26	24	11	11	7	2	4	15
INTEL ASST/ SPEC.	Mos in Current Position	AA	13	38	31	15	8	8	-	-	-
		NG/USAR	29	42	21	24	7	3	-	3	-
	Mos. in all OPS/ INTEL Positions	AA	13	8	46	-	8	15	-	-	23
		NG/USAR	29	29	17	21	10	3	3	10	7
Selected Sub-Courses (Y01-Y16)	Mos. in Current Position	AA	27	56	22	15	7	-	-	-	-
		NG/USAR	45	29	25	9	2	11	4	13	7
	Mos. in all OPS/ INTEL Positions	AA	27	41	22	4	4	11	11	-	7
		NG/USAR	45	20	24	7	-	18	7	22	2
Total (Y01-Y16)	Mos. in Current Position	AA	198	39	28	16	9	4	-	-	4
		NG/USAR	436	29	24	12	9	9	4	7	6
	Mos. in all OPS/ INTEL Positions	AA	198	22	22	13	7	12	4	12	8
		NG/USAR	436	18	17	10	8	11	8	21	7

[a]Numbers represent percent